



ANNOTATED BIBLIOGRAPHY
OF
SOCIAL, DEMOGRAPHIC, CULTURAL,
AND BEHAVIORAL ASPECTS
OF
FAMILY PLANNING AND REPRODUCTIVE HEALTH IN NIGERIA

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by William Brieger

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CONTENTS

	Page
I.Sex and Reproduction.....	1
.....Sexual Behavior, Sexuality, and Sexual Networking.....	1
.....Fertility, Infertility, and Family Size	4
.....Adolescent Reproductive Health	18
II.Contraception.....	26
.....Choices.....	26
.....Birth Interval, Birth Spacing, and LAM.....	42
.....Contraceptive Providers.....	45
.....Quality of Family Planning Services	47
III.Reproductive Rights	51
.....Policy and Law	51
.....Culture, Rights, and Coercion.....	54
IV.Safe Motherhood.....	58
.....Maternal Mortality.....	58
.....Maternal Health Services.....	62
.....Traditional Birth Attendants	66
.....Abortion	69
.....Female Genital Cutting and Circumcision.....	81
V.Gender Issues	84
VI.Reproductive Health and Disease.....	88
VII.Programs and Interventions	91
VIII...Other Topics.....	97

I. SEX AND REPRODUCTION

Sexual Behavior, Sexuality, and Sexual Networking

Adinma, J.I. "Sexuality in Nigerian Pregnant Women: Perceptions and Practice." *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 35(3):290–3, August 1995 (Department of Obstetrics and Gynaecology, College of Health Sciences, Nnamdi Azikiwe University, Nigeria).

The sexual behavior and beliefs of 440 pregnant women from Southeastern Nigeria were investigated. The mean frequency of sexual intercourse during pregnancy (1.5 times per week) was less than that before pregnancy (2.3 times per week). The husband was the main initiator of sexual activity (41.6 percent), while the wife was only rarely (2.7 percent). Of the respondents, 44.3 percent believed that sexual intercourse during pregnancy widens the vagina and facilitates labor; 34.8 percent believed that it improves fetal well-being; 30.2 percent believed that it caused abortion in early pregnancy, while 21.1 percent had no knowledge of any repercussions of sexual intercourse in pregnancy. Coitus during pregnancy was always painful for 22.7 percent of the respondents, was always gratifying for 46.1 percent, was functional for 49.3 percent, and also helped keep the husband around for 49.3 percent of the respondents. The majority of the respondents (83.4 percent) considered that coitus should not be stopped during pregnancy. While 19.3 percent of the respondents believed that sexual frequency should be increased during pregnancy, 73.9 percent considered otherwise, and 63.6 percent actually felt it should be reduced. Findings from this study suggest mixed feelings, with a tilt towards a positive attitude to sexuality in pregnancy. Restrictions should not be imposed on sexual activity during a normal pregnancy to enhance marital harmony.

Adinma, J.I. "Sexual Activity During and After Pregnancy." *Advances in Contraception*, 12(1):53–61, March 1996 (Department of Obstetrics and Gynaecology, Nnamdi Azikiwe University Teaching Hospital, Nnewi, Anambra State, Nigeria).

The factors related to sexual behavior during pregnancy and after childbirth were studied in 352 Nigerian women. Sexual frequency was higher during the postnatal period (1.7 times per week) compared with the pregnancy period (1.5 times per week). Coital frequency also showed no difference for the various social class and age groups but was more prevalent among the primigravidas compared with the higher parity groups ($p < 0.05$). Vulval itching was experienced in 246 (69.9 percent) women although this had no effect on sexual activity in 114 (46.5 percent) of them. The earliest date of resumption of sexual intercourse following childbirth was 3 days while the latest was 84 weeks. However, sexual activity was resumed between 6 and 12 weeks after delivery in 114 respondents (48.7 percent). The overall mean resumption time for sexual activity postpartum was 16.5 weeks. The longest mean resumption time occurred for breastfeeding/cultural reasons (41 weeks) and family planning reasons (23.9 weeks) while the shortest resumption time occurred for pleasure reasons (3.2 weeks). The attitude toward sexuality among African women during pregnancy and after childbirth can be said to be positive and purposeful, and this should be taken into account in the overall management of sexuality in the pregnant African woman.

Ajuwon, Ademola J., Oladimeji Oladepo, Joshua D. Adeniyi, and William R. Brieger. "Sexual Practices That May Favor the Transmission of HIV in a Rural Community in Nigeria." *International Quarterly of Community Health Education*; 14: 4, 403, 416, 1993–94.

Human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS) has been documented primarily as an urban phenomenon in Nigeria, but the risk persists of HIV spreading to rural communities, where the largest portion of the population lives. To explore sexual practices with the potential for introducing HIV into a rural community, interviews with seven key informants and five sex workers and focus groups with married and single residents (male and female) were held in a rural Yoruba community in northern Oyo State. It was concluded that likely entry routes for HIV were through sex workers (because of their own mobility and the mobility of their migrant farm laborer and commercial driver clients) and through townspeople returning home from large urban centers to celebrate holidays and festivals. Extramarital sexual relations, exacerbated by a taboo against sexual intercourse while a mother breastfeeds, frequent informal divorces, and a tendency toward polygamy, were posited as factors that may encourage the spread of HIV within the community. Social and religious associations may provide an ideal vehicle for health education to prevent HIV/AIDS.

Asowa-Omorodion, F.I. "Sexual and Health Behaviour of Commercial Sex Workers in Benin City, Edo State, Nigeria." *Health Care for Women International*, 21(4):335–45, June 2000.

This paper examined the sexual and health behaviors of sex workers in Nigeria, a high-risk group in this era of the HIV/AIDS epidemic. The aim is to provide indepth knowledge of their sexual networking and the prevalence of sexually transmitted diseases (STDs). This analysis is intended to highlight their implications in the spread and control of AIDS and HIV infection. The results of the study show the extensive sexual networking of these sex workers, the health implications, and the utilization of nonorthodox health services in diagnosing STDs. The implications of these results are the likely drain on the limited health resources of the Nigerian government and the harmful effects on the women, fetuses, children, and other sexual partners of clients of these sex workers.

Lawoyin, T.O., U. Larsen, H. Osinowo, and M.E. Walker. "Sexual Behavioural Risks of Married Men in Oyo State, Nigeria" [letter]. *International Journal of STD and AIDS*, 12(1):63–4, January 2001.

This study was conducted to examine the sexual and sociocultural activities of men in Oyo State, Nigeria. Using a multistage cluster design, a purposeful sample of 3,204 men was taken from randomly selected urban and rural local government areas (LGAs). Of the men interviewed, 1,232 (38.5 percent) had regular extramarital partners, called steady girlfriends (SGFs). Significantly, more monogamous men (660 or 42.5 percent) than polygamous men in the urban location had SGFs ($p < 0.05$). Similarly, more rural men in monogamous unions (269 or 39.7 percent) had SGFs compared with their polygamous counterparts (137 or 26.1 percent) ($p < 0.00001$). Moreover, reported visits to sex workers in the 6 months prior to the survey revealed that more urban (4.4 percent) than rural men (2.4 percent) patronized sex workers. Of the men, 23.7 percent reported a history of sexually transmitted infection (STI); over 70 percent of them went to private hospitals or herbalists or received over-the-counter treatment and self-medication.

Odimegwu, C.O., T.A. Bamsile, and C.N. Okemgbo. "Parental Knowledge, Attitude and Practice of Family Life Education in Apata Town of Ibadan, Nigeria." *Journal of Social Sciences*, 5(1–2):1–9. January–April, 2001.

It has been noted that many adolescent-focused programs in Nigeria have not been successful because they lack parental support. Yet no attempt has been made to examine what the parents know about family life education. The process of imparting both factual

knowledge (about human development, sexual relationships, preparation for parenthood, pregnancy, contraception, and sexually transmitted infections) and also values is called family life education. Though experts agree that the home is the best place to begin family life instruction, parents themselves are sometimes reluctant and uncomfortable doing so, as discussion of these topics may be embarrassing or even a taboo to them. They may not be knowledgeable about family life education. The authors carried out this descriptive and exploratory study to investigate the perception and attitudes of parents to family life issues and education in a Nigerian suburban community. The results show that of the 200 families interviewed, 74 percent have heard of family life education and their personal interpretation of family life education is correct; 92 percent believe that youths need guidance and counseling on sexual matters. Fifty-eight percent have discussed family life issues, mostly on menstruation, and 77 percent believe parents are the best family educators. The major causes of premarital sex are ignorance and lack of information. The majority of the parents do not believe that sex education will lead to sexual promiscuity. Many also indicated their willingness to participate in a sex education program for parents, to improve their capacity to deliver home-based family life education. Policy and research implications of the study are discussed. (author's comments, modified)

Omorodion, F.I. "Sexual Networking of Market Women in Benin City, Edo State, Nigeria." *Health Care for Women International*, 14(6):561–71, November–December, 1993.

The manifestation of AIDS all over the world has increased the need for information on the nature and pattern of sexual networking in Africa, where there is a dearth of such information. In the present study, information on the sexual networking of market women in Benin City, Nigeria, was obtained using a questionnaire. The questionnaire covered the sexual, reproductive, and health behaviors of these women. The data reveal that the levels of both premarital and extramarital sexual networking are high. Such a high degree of sexual networking has exposed a number of these women to STDs. The manifestation of AIDS in this society will be widespread and devastating to the people and the society because these women are in polygamous relationships in a society that frowns on the use of contraceptives by couples. In addition, controversies surround the correlation between socioeconomic status and AIDS, geographic areas of prevalence, and the role of prostitutes in the spread of the disease. For example, studies in Africa show that whereas there is no correlation between socioeconomic status and AIDS in Kinshasa, the attack rate was higher in educated people in Rwanda and Zambia. Moreover, there are predominantly urban outbreaks in other countries, such as Uganda (Piot and Crael, 1988).

Onah, H.E., G.C. Iloabachie, S.N. Obi, F.O. Ezugwu, and J.N. Eze. "Nigerian Male Sexual Activity During Pregnancy." *International Journal of Gynaecology and Obstetrics*, 76:219–23, 2002.

This study aimed to determine the prevalence of extramarital sexual affairs as well as other aspects of male sexual behavior during pregnancy in Nigeria. A questionnaire survey of the husbands of consecutive women who delivered in three tertiary care centers in southeastern Nigeria within an 8-week period was conducted. The data were analyzed by means of simple percentages and descriptive and inferential statistics, using t-tests, chi-square tests, and regression equations at the 95 percent confidence level. Of the 316 eligible husbands, 279 (88.3 percent) responded to the questionnaire. A total of 78 (28 percent) of the respondents engaged in extramarital sexual relationships during pregnancy. Of the respondents, 36.6 percent and 32.3 percent experienced a decrease in achievement of erection and orgasm, respectively. While libido decreased in 41.9 percent, coital frequency declined in 72.4 percent of the respondents. On univariate analysis, for respondents aged 40

or more with duration of marriage five or more years, having an extramarital sexual partner and beliefs that coitus during pregnancy should be less frequent or can cause miscarriage were significant predictors of reduced coital frequency, while a belief that coitus enhances fetal well-being was a significant predictor of increased coital frequency during pregnancy ($p < 0.05$ for each variable). On multivariate logistic regression, three factors were statistically significant predictors of reduced coital frequency: an age of 40 or more (odds ratio equals 2.3, 95 percent confidence interval 1.9–2.3); beliefs that coitus during pregnancy can cause miscarriage (odds ratio equals 1.9; 95 percent confidence interval 1.5–2.3); and beliefs that coitus during pregnancy should be less frequent (odds ratio equals 1.9; 95 percent confidence interval 1.8–2.5). In conclusion, personal beliefs significantly affect sexual relationships between Nigerian husbands and their pregnant wives, making approximately one third of husbands engage in extramarital relationships as a way to satisfy their unmet sexual need during pregnancy. There is a need to educate husbands and their pregnant wives on sexual matters during pregnancy.

Fertility, Infertility, and Family Size

Aborampah, O. “Plural Marriage and Fertility Differentials: A Study of the Yoruba of Western Nigeria.” *Human Organization* 46(1): 29–38, Spring 1987.

“This study employs multiple classification and regression techniques to show how matrimonial, sociodemographic variables and duration of postpartum sexual abstinence influence fertility. A distinction is made between type of marriage and the position a woman occupies in a hierarchically ordered polygynous union in explaining fertility among a sample of 300 Yoruba women of Western Nigeria. Among all the variables considered, age, place of residence, and age at first marriage appeared to be significantly related to individual fertility. No significant variation in the postpartum variables and fertility between monogamous and polygynous women emerged; neither was domestic hierarchy found to play any major role in childbearing and abstinence practices of our sample of Yoruba women. The effect of contraception on the postpartum variables appeared to be a function of socioeconomic status. The findings imply that 1) social change may have altered the older connection between polygyny, abstinence and fertility, and 2) reductions in the duration of the postpartum variables, due to relative affluence, can result in significant increases in individual fertility unless effective substitutes are available and used.”

Adetoro, O.O. and E.W. Ebomoyi. “The Prevalence of Infertility in a Rural Nigerian Community.” *African Journal of Medicine and Medical Sciences*, 20(1):23–7, March 1991 (Department of Obstetrics and Gynaecology, University of Ilorin, Nigeria.).

The prevalence of infertility in a rural Nigerian community is determined by a systematic random sampling of the population. Overall prevalence was 30.3 percent, giving indices of 9.2 percent for primary infertility and 21.1 percent for secondary infertility. Primary infertility is rare after the age of 30 and acquired causes of infertility are responsible for the high prevalence. Genital infections (postabortal and puerperal) are major contributory factors to the high rate of infertility. Liberal abortion laws, improved socioeconomic status, and elimination of harmful sociocultural beliefs and practices would reduce the problem of infertility to the barest minimum in developing countries.

Aghanwa, H.S., F.O. Dare, and S.O. Ogunniyi. “Sociodemographic Factors in Mental Disorders Associated with Infertility in Nigeria.” *Journal of Psychosomatic Research*, 46(2):117–23, February 1999 (Department of Mental Health, College of Health Sciences, Obafemi Awolowo University, Ile-Ife, Nigeria, haghanwa@oauife.edu.ng).

The mental status of 37 female patients with infertility and that of 37 healthy controls was evaluated using a general health questionnaire, present state examination, and clinical assessment. An interview schedule, designed to elicit information on sociodemographic, psychiatric predisposing, and obstetric factors, also was administered. A significantly higher proportion (29.7 percent) of the patients was found to have diagnosable psychopathology, mainly depressive episode and generalized anxiety disorder. Compared with the control group, the infertile women experienced poorer marital relationships, had a significant family history of infertility, were more negatively predisposed to child adoption, and had a greater history of surgery and induced abortion. Polygamy was found to have a close association with psychopathology in the sample of infertile women. The implications of these findings and ways of improving the mental status of the infertile woman are discussed.

Ahonsi, B.A. "Components of Stably High Fertility in Three Areas of West Africa." *Social Science and Medicine*, 33(7):849–57, 1991.

"The constancy of fertility levels in Ghana, Senegal, and southwest Nigeria since 1970 is separated into its nuptiality and marital fertility elements. The age-specific changes in the two components are examined and these show that the apparent stability in observed total fertility rates is essentially the outcome of the offsetting impact of increased marital fertility below age 25 and above age 40, over the effect of the increasing proportion of women remaining single up to 25 [years] of age. Continuity in traditional fertility behaviour and stable nuptiality has remained operative over the broad middle segment of the reproductive lifespan of women in the three areas. The paper thus concludes that West Africa is likely to continue to display stably high fertility for many years into the next century."

Akanji, B.O., A. Ogunniyi, and O. Baiyewu. "Healthcare for Older Persons, a Country Profile: Nigeria." *Journal of the American Geriatric Society*, 50(7):1289–92, July 2002 (Nigerian Institute of Social and Economic Research, Ibadan, Nigeria).

The Nigerian population is undergoing demographic transition, with an increasing population of older people. Nuclear and extended family members traditionally care for older persons at home. Changes in home living conditions due to reduced family size have been observed, and urban migration for economic reasons is likely to affect the care of older people. The inadequately funded health care system has placed little emphasis on the care of older people because there are more pressing health problems and funding for older people is limited. This paper advocates improved attention to the health needs of older people through improved budgetary allocation, revision of the training curriculum of all cadres of health staff to include geriatrics, and utilization of primary health care facilities.

Akinkoye, O. "Attitude Toward Childbearing by Single Nigerian Women." *Nigerian Journal of Economic and Social Studies*, 26(1):135–42, March 1984.

The author examines attitudes toward childbearing by unmarried Nigerian women using data from interviews with a sample of 212 male and female residents of Ibadan, Nigeria, chosen in order to examine the views of educated Nigerians. The respondents were, for the most part, Yorubas, married, and aged 20–40. Excerpts: "In general, the respondents supported the suggestion that women who are unmarried should try and have children of their own, but they are opposed to the suggestion that such women should have as many children as possible, either from the same man or from different men of their choice." The author suggests that "...one significant implication of the survey is that the general fertility rate (that is the annual number of births per 1,000 women of reproductive age) may be very high in developing areas not only because married women produce children, but also

because women of childbearing ages who are single [are] also encouraged to have children of their own.”

Ampofo, K. “Attitudes Towards Family Size and Family Planning Among Women at an Antenatal Clinic in Maiduguri, Nigeria.” *Biology and Society*, 4(4):183–90, December 1987.

This report describes a family planning survey [involving 172 women] conducted at an antenatal clinic in Maiduguri, Nigeria, between June and August 1984. The level of education of respondents is generally low and appears to have a negative effect on knowledge, approval, and use of family planning. Breastfeeding is widespread but not many respondents practiced it as a method of family planning. While there is limited knowledge and some approval of family planning, a desire for large families continues and there is relatively little practice of family limitation. The prospects for a decrease in fertility in the near future is not encouraging.

Anate, M. and A.W. Olatinwo. “Anovulatory Infertility: A Report of Four Cases and Literature Review.” *Nigerian Journal of Medicine*. 10(2):85–90, April–June 2001 (Department of Obstetrics and Gynaecology, University of Ilorin Teaching Hospital, Ilorin).

Four cases of anovulatory/dysovulatory infertility encountered in Ilorin, Nigeria, are presented and the literature extensively reviewed on the up-to-date management of this aspect of infertility. All the patients had bilateral tubal patency on hysterosalpingography (HSG) and their husbands had normal seminal fluid analysis. The first case, 30 years of age, had hyperprolactinaemia with galactorrhea, treated with bromocriptine given 2.5 mg twice daily. Another case, aged 27 years, had polycystic ovarian syndrome with hyperprolactinaemia but no galactorrhea. This was treated with clomiphene citrate, 100 mg daily. The third case, 34 years old, had hypothyroidism with hyperprolactinaemia and galactorrhea and was treated with thyroxine. The last case, aged 32 years, had hyperprolactinaemia and was treated with bromocriptine and clomiphene citrate. None of the patients had demonstrable pituitary adenoma. After the appropriate treatment, ovulatory menses were restored in all the patients; two have been pregnant, while the other two have not yet achieved pregnancy but are having regular ovulatory menses. All the patients are Nigerians.

Anosike, J.C. and O.C. Abanobi. “Reversal of Amenorrhoea after Mectizan Treatment.” *Tropical and Geographical Medicine*, 47(5):222–4, 1995 (River Blindness Foundation, Imo/Abia States Onchocerciasis Control Project, Aladinma, Owerri, Imo State, Nigeria).

“Plausible reversal of secondary amenorrhoea in three women infected with onchocerciasis after Mectizan treatment in Imo State, Nigeria, is presented. The women, aged 30, 28, and 32 years, with drastic reduction in mean microfilaria scores had reversed amenorrhoea 8, 13 and 10 days post-Mectizan treatment, respectively. They had typical manifestation of onchocerciasis including nodules, pruritic rash, body itching and musculo-skeletal pains. The manifestations eased off 4 days post-treatment. The plausible link between loss of fertility due to premature menopause in women and onchocerciasis is discussed.”

Avong, H.N. “Religion and Fertility Among the Atyap in Nigeria.” *Journal of Biosocial Science*, 33(1):1–12, January 2001 (Demography Program, Australian National University, Canberra, Australia).

Using data obtained in 1995 from 600 Atyap women in randomly selected dwellings in Kaduna State, Nigeria, multiple regression analysis shows that Catholics and Protestants (Anglicans and Baptists) have higher fertility than women affiliated to the Evangelical

Churches of West Africa (ECWA), even net of compositional characteristics of the two groups. Above and beyond the denominational differences, the regression analysis also shows that the stronger the religious belief, the higher the fertility. Thus, the study underscores the need for researchers of the religion-fertility association in Nigeria to examine the influence of religious denomination and religiosity on fertility, within each of the main religions.

Badejo, O.A. "The Effect of Urethral Stricture on Male Fertility in Ife." *Panminerva Medica*, 32(4):172–5, October–December 1990 (Department of Surgery, Faculty of Health Sciences, Obafemi Awolowo University, Ile-Ife, Nigeria).

Twenty patients with urethral stricture disease presenting with difficulty in micturition, azoospermia, and oligospermia were studied. Only 5 percent of patients could firmly claim to be fertile at the time of presentation with a rise to 80 percent fertility rate at the end of management. Fifteen percent did not notice any change in their status. Surgical approach claimed better result over conservative management because of other complications following gonococcal infections. The need for a close forensic analysis in the determination of paternity in all cases of urethral strictures was stressed while a treatment protocol of graft urethroplasty in all cases of traumatic rupture and dilatation in cases following inflammatory lesions of the urethra was established.

Chimere-Dan, O. "Determinants of Rural and Urban Fertility Differentials in Nigeria." *Journal of Biosocial Sciences*, 22(3):293–303, July 1990 (London School of Economics and Political Science).

Whatever proximate variables are examined, their differential effects on rural and urban fertility are small. This indicates that no major disturbance has taken place in urban or rural reproductive norms. However, two possible reasons for the converging pattern of rural and urban fertility in Nigeria are identified. One is that urban mothers in the first half of the childbearing age range have higher fertility than their rural counterparts. The other is that breastfeeding and postpartum abstinence, which are the major determinants of marital fertility, exert a more depressing influence on rural than urban fertility.

Chimere-Dan, O. "Proximate Determinants of Fertility in Nigeria." *Social Biology*, 37(3–4):162–71, Fall–Winter 1990 (London School of Economics and Political Science).

Data from the 1981–82 Nigeria Fertility Survey (NFS) are used to identify the key proximate determinants of fertility in Nigeria. The patterns of their individual and collective effects are analyzed in a search for possible sources of fertility change. Exposure to the risk of childbearing through first marriage is found to be the most important proximate determinant of Nigerian fertility. Subsequent to marriage, fertility is determined mainly by breastfeeding and postpartum sexual abstinence. Where fertility shows significant socioeconomic variations, there are equally identifiable patterns of the impact of the proximate determinants, which explain these differentials to a large extent. On a national scale, the observed patterns of the impact of the measured proximate determinants do not appear to suggest that Nigerian fertility is soon to experience a large decline.

Dimkpa-Harry, S.H. "Probabilistic Analysis of Fertility and Fecundity: An Application to Tombia in Rivers State of Nigeria." *African Study Monographs*, 12(3):161–6, October 1991.

"This paper discusses fertility and fecundity from a probabilistic point of view, using Tombia [Nigeria] as a case study. The fertility distribution in Tombia, fertility beyond a given time, infertility rate, measures of central tendencies and dispersion of the fertility distribution in Tombia, prediction of age at menopause in Tombia and projection of fertility

beyond a given time are discussed. The emphasis is on the discussion and interpretation of the results obtained in the probabilistic models developed therein.”

Ekwere, P.D. “Immunological Infertility Among Nigerian Men: Incidence of Circulating Antisperm Auto-antibodies and Some Clinical Observations: A Preliminary Report.” *British Journal of Urology*, 76(3):366–70, September 1995 (University Department of Surgery, College of Medical Sciences, University of Calabar, Nigeria).

Objectives: To (i) establish the incidence of circulating antisperm auto-antibodies among infertile men; (ii) relate this incidence to the high prevalence of STDs in subSaharan Africa and; (iii) elucidate the effect of steroid and other therapy on semen quality and subsequent fertility of the patients. **Patients and methods:** Serum samples from 50 infertile men and 50 age-matched controls were assayed by two agglutination techniques for antisperm antibodies. Mean sperm concentrations were determined before and after steroid treatment of patients having antibody titres of 1:64 or above. Serum levels of follicle-stimulating hormone, luteinizing hormone, testosterone and prolactin were also determined by radioimmunoassay in 38 patients. Seminal fluid analysis and culture were performed in 35 patients and testicular histology determined in 21. **Results:** Agglutination was demonstrated in 22 of 50 sera (44 percent), whilst nonagglutinating cytotoxic antibodies were detected in two. Only two of the 50 control sera (4 percent) were positive. After steroid therapy, antibody titres were significantly decreased and there was a sixfold improvement in mean sperm concentration and a threefold improvement in motility and morphological characteristics. Bacterial (46 percent) and nonbacterial (17 percent) infection were recorded in 22 of 35 patients, 13 of whom showed the presence of antisperm antibodies in their sera. *Staphylococcus aureus* was the most common single bacterial isolate. Overall, 13 of 29 patients (45 percent) improved, nine accounting for 12 pregnancies. Pregnancies and/or improvements in semen quality were observed only among patients with mild histological changes. Low testosterone and prolactinaemia occurred in 29 percent and 21 percent of the patients, respectively. Among these, antisperm antibodies were also recorded in 18 percent and 13 percent, respectively. **Conclusion:** The incidence of antisperm antibodies among infertile men is high in Nigeria and may be related to high prevalence of STDs. Immunologically infertile men can be treated successfully with steroids. Concomitant antibiotic and hormone therapy may also be essential in appropriate cases. Clinicians are advised to adopt a multimodal approach to the treatment of male infertility in subSaharan Africa. The presence of nonagglutinating cytotoxic antibodies calls for further investigation of the role of complement in the pathogenesis of immunological infertility.

Ezeh, U.O., and O. Modebe. “Is There Increased Fertility in Adult Males with the Sick Cell Trait?” *Human Biology*, 68(4):555–62, August 1996 (Department of Obstetrics and Gynaecology, Jessop Hospital for Women, Sheffield, England).

Different proposals have been offered to explain the polymorphism of the sickle cell hemoglobin gene. One of these proposals (Eaton and Mucha, 1971) suggested that differential fertility of male subjects with the sickle cell trait contributes to the persistence and stability of the sickle cell gene frequency. Eaton and Mucha claimed that oligospermia, induced by hyperpyrexia, is a less common problem in these subjects because they probably have milder and shorter episodes of fever from malaria infection than subjects with a normal genotype. Evidence was sought to support this hypothesis by comparing the testicular function, testicular size, and serum concentrations of the reproductive hormones in adult male subjects with the sickle cell trait and in an age-matched group of subjects with normal hemoglobin genotype. The mean serum concentration of testosterone, luteinizing hormone, follicle-stimulating hormone, and prolactin of both groups, measured by radio-immunoassay,

were not statistically different from each other. Also, there was no detectable difference in any of the common indexes of semen quality between the two groups. The testicular volume index and several anthropometric indexes of subjects with the sickle cell trait and subjects with the normal hemoglobin genotype were also statistically similar. The results suggest that gonadal function is similar in adult males with the normal genotype and those with the sickle cell trait. Any increase in fertility observed in the latter group is probably due to extragonadal factors.

Fakeye, O. "Pregnancies too Young, too Old, too Many and too Frequent in Nigeria: Prevalence and the Effect on Birthweight and Perinatal Mortality." *Tropical and Geographical Medicine*, 44(1-2):174-7. January 1992 (Department of Obstetrics and Gynaecology, University of Ilorin, Nigeria).

Among 2,865 consecutive singleton deliveries at Ilorin, Nigeria, high-risk pregnancies classified as too young (206 or 7.2 percent), too old (74 or 2.6 percent), too many (234 or 8.2 percent), too frequent (216 or 7.5 percent), and two or more variables (283 or 9.8 percent) accounted for a total of 1,013 (33.9 percent) deliveries. Low birth weight infants are significantly more often among high-risk infants (89 or 8.8 percent) when compared with control infants (87 or 4.7 percent) ($p < 0.001$). Similarly, the relative risk for perinatal mortality was 2.8-6.8 times higher among the high-risk pregnancies. A comprehensive program offering family planning, education, and economic opportunities is advocated for prevention.

Feyisetan, B.J. and A. Bankole. "Mate Selection and Fertility in Urban Nigeria." *Journal of Comparative Family Studies*, 22(3):273-92, Autumn 1991.

"This paper examines if and how the mode of selecting a marriage partner relates to marital fertility in urban Nigeria. Three sets of test variables are identified...: (i) religion and ethnicity, which are antecedent to both mate selection and marital fertility; (ii) education of the woman before marriage, which is perceived to be concomitant with features of mode of mate selection; and (iii) intervening variables that include duration of marriage (which is also an exposure variable), women's working patterns, contraceptive use, and age difference between spouses. Data for this study were derived from a 1987-88 survey of (9,664 ever-married women aged 15-49 living in) nine major cities in Nigeria."

Gage-Brandon, A.J. "The Polygyny-Divorce Relationship: a Case Study of Nigeria." *Journal of Marriage and Family*, 54(2):285-92, May 1992.

"While the relationship between polygyny and fertility has drawn the attention of many demographers, little research has been done on the polygyny-divorce relationship. Using data from the Nigeria Fertility Survey of 1981-82 and proportional hazard models, this paper estimates the effect of polygyny on the stability of first unions. The results indicate that a simple dichotomy of polygynous and monogamous unions may be misleading. Two-wife unions are the most stable whereas unions with three or more wives are associated with the highest rates of marital disruption. These effects are independent of childlessness, marriage duration, and other factors." This is a revised version of a paper originally presented at the 1991 annual meeting of the Population Association of America.

Grossbard-Shechtman A. "Economic Behavior, Marriage and Fertility: Two Lessons from Polygyny." *Journal of Economic Behavior and Organization*, 7(4):415-24, December 1986.

"This paper derives and estimates an index of the relative importance of children in marriage by comparing the effect of husband's income on the actual number of wives in the household with the demand for wives derived from the number of children in the household.

Moreover, the paper presents the monogamy bias as a possible explanation for often observed low or negative income effects on fertility.” The data are from two surveys carried out about 1971 in Maiduguri, capital of the northeastern state of Nigeria.

Hollos, M. and U. Larsen. “Fertility Differentials Among the Ijo in Southern Nigeria: Does Urban Residence Make a Difference?” *Social Science and Medicine*, 135(9):1199–210, November 1992 (Department of Anthropology, Brown University, Providence, RI 02915).

The paper tests some of the conflicting hypotheses regarding the effects of urban living and education on fertility by examining the fertility levels of women migrants—some educated, others not—to various urban centers in one Nigerian ethnic group. Of particular interest are the conditions under which the urban residents live and the examination of the concept of “urban” in this West African context. Research methodology consisted of a two-pronged approach and combined an intensive ethnographic study of the families in the rural home community and in one urban center, with a demographic survey administered to a larger sample of the rural residents and urban migrants. Analysis indicates that the effect of education on fertility is more powerful than urban or rural residence. The importance of utilizing culturally appropriate categories in demographic research is discussed.

Imade, G.E., O.A. Towobola, A.S. Sagay, and J.A. Otubu. “Sexually Transmitted Diseases and Medico-social Factors Associated with Male Infertility in Nigeria.” *Archives of AIDS Research*, 7(3–4):245–52, 1993.

Medico-social factors, such as type of infertility, sexually transmitted diseases (STDs), drug abuse, erectile dysfunction, divorce, and polygamy were evaluated among 64 infertile men (i.e., 32 oligo-asthenozoospermic and 32 azoospermic) and 23 men of proven fertility in Jos University Teaching Hospital, Jos, Nigeria. Of the 64 infertile men, 27 (42 percent) and 37 (58 percent) had primary and secondary infertility, respectively. A history of STDs, indicated by purulent urethral discharge, was recorded among 40 (63 percent), with 22 (55 percent) of this number having had repeated exposures to STDs. While 17 (43 percent) of the infected infertile men were treated by qualified medical doctors, 23 (57 percent) were either self-medicated or had received treatment from unskilled practitioners. Five (8 percent) of the 64 infertile men used hard drugs, 11 (17 percent) had erectile dysfunction, 15 (23 percent) were remarried due to broken marriage or divorce, and 7 (11 percent) were polygamous. All the fertile men were monogamous with no history of either erectile dysfunction or usage of hard drugs. One (4 percent) of the fertile men had a history of broken marriage relationships. Six (26 percent) had a history of STDs, with 5 (26 percent) having received treatment from qualified medical doctors. Although the study population is small, the results obtained in this study reveal higher incidences of STDs, marital instability, and multiple marriage partnerships (polygamy) among infertile men compared with the fertile in Jos.

Iro, M.I. “Projecting Igbo Population to the Year 2000 and Beyond.” *Genus* 45(3–4):153–64, July–December, 1989.

“This study addresses the issues and the consequences of the growth of [the] Igbo population [of Nigeria] from the precolonial period to the year 2000 and beyond; it reveals that though the political crises of the Nigerian Civil War have reduced the tempo of the growth of the population, the high fertility rate observed in Igbo society will over time lead to a rapid recovery in the growth of the population.”

Isiugo-Abanihe, U.C. "Reproductive Motivation and Family Size Preferences Among Nigerian Men." *Studies in Family Planning*, 25(3):149–61, May–June, 1994 (Department of Sociology, University of Ibadan, Nigeria).

Data collected from 3,073 couples in four Nigerian cities and one semi-urban settlement were used to examine reproductive decision-making and male motivation for large family size. The report concludes that the characteristic male-dominant and patrilineal traditions support large family size and that men's reproductive motivation, to a large extent, affects the reproductive behavior of their wives. Therefore, the factors influencing men's reproductive outcomes and intentions are considered important for fertility transition in Nigeria. Male education, age at marriage, monogamy, interspousal communication, and intention not to rely on children for old-age support are significantly related to smaller actual family size and preferences for smaller families, while being in a male-dominant family setting has a strong relation with large family size and preferences for larger families. The policy implication of this study is the need for programs targeted at men and designed to change their attitudes about population matters and motivate them, and hence their wives, to produce smaller families.

Isiugo-Abanihe, U.C., J.A. Ebigbola, and A.A Adewuyi. "Urban Nuptiality Patterns and Marital Fertility in Nigeria." *Journal of Biosocial Science*, 25(4):483–98, October 1993 (Department of Sociology, University of Ibadan, Nigeria).

This study indicates that urban marital patterns in nine Nigerian cities influence fertility. Fertility is also influenced by age at marriage, region of residence, ethnicity, and religion; education and employment lead to marriage delay and tend to conflict with childbearing by enhancing the status of women.

Isiugo-Abanihe U.C. "Bridewealth, Marriage and Fertility in the East-Central States of Nigeria." *Genus*, 51(3–4):151–78, July–December 1995.

The paper examines the determinants of high bridewealth in the east-central states of Nigeria, inhabited by the Igbo, and relates high bridewealth to rising age at marriage among both men and women. High and rising bridewealth in Igboland is associated with the prevailing economic situation, socioeconomic status of bride's parents, the rising incidence of self-selection of marital partners in place of arranged marriages, and particularly increasing female education. The rising age at marriage in Igboland cannot be understood only on the basis of increasing urbanization, female education, and employment opportunities; rising bridewealth, which reduces the tempo of marriage, needs to be considered as well. The study ends with an investigation of the determinants of marital fertility through the use of a causal model that includes bridewealth, age at marriage, and other socioeconomic variables.

Isiugo-Abanihe, U.C. "Stability of Marital Unions and Fertility in Nigeria." *Journal of Biosocial Science*, 30(1):33–41, January 1998 (Department of Sociology, University of Ibadan, Nigeria).

Using nationally representative data, it is shown that marital unions are relatively stable in Nigeria. Remarriage rates are high so little time is lost between unions. Consequently, the fertility of women who have experienced marital disruption is only slightly lower than for those in stable unions. Their slightly lower parity may be a function of a high incidence of reproductive impairment, which is a major reason for divorce and separation in Nigeria.

Koster-Oyekan, W. *Fertility Regulation Among the Yoruba: An Applied Participatory Research Project in Lagos State*. Report. Lagos, Nigeria: Women's Health and Action Research Centre, June 2000 [5], 63 pp.

Fertility regulation means all methods and measures intended to influence the natural fertility of a woman. Such methods and measures include infertility treatments, contraception, and induced abortion. This paper presents the procedures, experiences, major findings, and recommendations of an applied research project in fertility regulation practices among the Yoruba of Lagos State, Nigeria, from 1997–99. Outlined into eight chapters, chapter 1 is the introduction and gives the rationale for the study and the study objectives. Chapter 2 explains the study methodology and focuses on some of the major activities. Chapter 3 introduces the Yoruba traditional midwives, whose services are highly used in both rural and urban areas. Chapter 4 presents the study findings on the perceptions and treatments of infertility. Chapter 5 deals with prevention of pregnancy and reasons why women are not using any prevention. Chapter 6 tackles the problems related to induced abortion. The discussion and findings on youths are presented in chapter 7. Finally, chapter 8 displays the recommendations for addressing the identified problems. It is hoped that this study will provide more insight into the problems related to fertility regulation and increase the motivation to take action and tackle the problems in an objective, practical way, without prejudices.

Lawoyin, T.O. and M.O. Onadeko. "Fertility and Childbearing Practices in a Rural African Community." *West African Journal of Medicine*, 16(4):204–7, October–December 1997 (Department of Community Medicine, College of Medicine, University College Hospital, Ibadan).

This longitudinal, community-based study was carried out to gain insight into factors that influence childbearing practices and fertility in a typical Yoruba village in S.W. Nigeria. Although fertility is shown to be on the decline in most developing countries, a relatively high fertility is still sustained in the rural areas of this country. Women start childbearing early and continue into advanced reproductive ages. Median age of the women who delivered in the two-year study period was 24 years with peak fertility seen between ages 20–24 years. Seasonality of births was observed due to religion and the agricultural cycle. Unadjusted total fertility rate was 8.83 for 1993 and 8.47 for 1994. This small decline in total fertility rate was not significant (paired t-test $t = 1.3$, $p = 0.28$). Traditional attitudes which favor high fertility are maintained because of ignorance about modern family planning methods, low child survival rates, and the ingrained custom of using children as a source of help on the farms. In addition, children are still the major source of support in old age. It is recommended that in order to reduce the national total fertility rate, attention be paid to the rural areas where the majority of the people reside. Potential modifiable factors include improving child survival rates, increasing contraceptive awareness and education, and a general improvement in the socioeconomic conditions of the rural areas of this country.

Mai, A.M. and B.M. Audu. "Northern Nigeria Fertility." *Tropical Doctor*, 26(2):82–3, April 1996 (Department of Obstetrics and Gynaecology, University of Maiduguri Teaching Hospital [UMTH], Nigeria).

Mbamaonyekwu, C.J. "Signs of Fertility Transition in Nigeria." *Etude de la Population Africaine/African Population Studies*, 15(1):23–42, August 2000.

Empirical evidence emanating from two nationally representative sample surveys in Nigeria, the 1981–82 Nigeria Fertility Survey and the 1990 Nigeria Demographic and Health Survey, is used to argue that there may be signs of fertility decline in Nigeria, particularly in

the South. Further research in this area with more recent empirical information is highly recommended because the data used here are of poor quality. The results indicate that reproductive preferences in Nigeria have changed dramatically between the two periods, particularly the proportion of currently married women who desire no more children. The severe economic situation in the country at the time may have given rise to some reassessment, postponement, and termination of childbearing by many couples. (author's comments)

Modebe, O. and U.O. Ezeh. "Effect of Age on Testicular Function in Adult Males with Sick Cell Anemia." *Fertility and Sterility*, 63(4):907–12, April 1995 (University of Nigeria Teaching Hospital, Enugu).

Objectives: To determine the effect of age on testicular function and fertility profile of adult males with homozygous sickle cell disease. Design: A comparative cross-sectional study. **Setting:** A university teaching hospital in Nigeria. Participants: Twenty-two adult males with homozygous sickle cell disease and 20 healthy adult males with normal hemoglobin genotype. **Main Outcome Measures:** Seminal indexes, serum concentration of reproductive hormones, body mass index, testicular volume index, and span-height difference of patients with homozygous sickle cell disease and normal subjects were compared. Also, significant differences were sought between two age groups among patients and control subjects: those 25 years old or younger and those over 25. **Results:** The mean body mass index, testicular volume index, serum T concentration, and indices of semen quality of the patients with homozygous sickle cell disease were significantly lower than the values for the control subjects. In contrast, there was no significant difference in the mean concentration of FSH, LH, PRL, and mean span-height difference between both groups. Also, although no significant age-related effect on serum T concentration, testicular volume index, and sperm density was found in the subjects 18 to 40 years of age with normal hemoglobin genotype, patients over 25 years with homozygous sickle cell disease had significantly higher mean serum T concentration and mean testicular volume index than those 25 or under; their sperm density was also substantially higher. **Conclusion:** Fertility is impaired in adult males with homozygous sickle cell disease, probably as a result of abnormal hypothalamic or pituitary function. There is a significant amelioration of the hypogonadism, abnormal sexual function, and poor semen profile with increasing age.

Nigeria National Population Commission. *Nigeria Demographic and Health Survey, 1999*. Abuja, Nigeria: National Population Commission, December 2000, xxii, 321 pp.

This report presents the results of the 1999 Nigeria Demographic and Health Survey (NDHS) collected from 8,199 women, aged 15–59, and 3,082 men, aged 15–64. The NDHS provides information on levels and trends of fertility, family planning practice, maternal and child health, infant and child mortality, and maternal mortality, as well as awareness of HIV/AIDS and other STDs and female circumcision. The key findings follow. First, the total fertility rate during the five years before the survey was 5.2 births per woman, thus showing a drop from the 6.0 births per woman reported in the 1990 NDHS and the 5.4 births per woman from the 1994 Sentinel Survey. Second, the contraceptive prevalence rate had increased, implying an increase in awareness about family planning methods. Third, antenatal care was common in Nigeria, with mothers receiving antenatal check-ups from doctor, nurse, or midwife for two out of three births in the three years preceding the survey. However, the content of the antenatal care visits appears to be lacking. About one of four Nigerian women aged 15–49 had been circumcised. Fourth, a decline in childhood vaccination coverage was also noted. The proportion of children fully immunized dropped from 30 percent in 1990 to 17 percent in 1999. In addition, diarrhea and respiratory illnesses

were common causes of childhood death. Fifth, breastfeeding was widely practiced in Nigeria, with 96 percent of children being breastfed. Lastly, the survey data indicated that awareness of HIV/AIDS was becoming more widespread.

Nwabuisi, C. and B.A. Onile. "Male Infertility Among Sexually Transmitted Diseases Clinic Attendees in Ilorin, Nigeria." *Nigerian Journal of Medicine*, 10(2):68–71, April–June 2001 (Department of Medical Microbiology and Parasitology, Faculty of Health Sciences, University of Ilorin, Ilorin, Nigeria).

The fertility status of 456 men who attended the STD clinic of the University of Ilorin Teaching Hospital (UITH), Ilorin, because of infertility was studied, using their seminal fluid analysis. One hundred fifty nine (34.8 percent) and 297 (65.2 percent) presented with primary and secondary infertility, respectively. Of the total, 108 (23.7 percent) were infertile, or azospermic, while 207 (45.3 percent) were subfertile or oligospermic. Of the infertile men, a significant proportion (45.4 percent) were nonindigenes. Nearly fifty percent of the subfertile subjects had mild oligospermia and could benefit from simple therapeutic procedures. The study recorded 7 percent bacteriospermia, which may have contributed to male infertility in his environment. The importance of these findings are discussed with positive suggestions towards prevention and control of male infertility.

Nyong, M.O. *Population Growth, Savings Rates and Economic Development in Nigeria*. Study Report No. 43. Dakar, Senegal: Union for African Population Studies, April 2000, ix, 66 pp.

This study examined the relationship between population growth, savings rate, and economic development in Nigeria with a view to providing a policy backup aimed at mitigating the undesirable consequences of rapid population growth. Overall, findings suggest that the factors influencing demographic transition are high per capita income, high literacy rate, and low death rate. The national savings rate tends to fall with an increasing dependency burden and increase in foreign capital inflows. In addition, an increase in per capita income may lead to a higher literacy rate and technological progress, while an increase in population growth leads to a decline in literacy rate. As the percentage of women engaging in the modern industrial sector increases, the birth rate declines. However, engagement in agricultural activity favors a high rate of childbearing. A suboptimal allocation of resources may occur in an environment of high birth rate and dependency burden. In general, high population growth depresses savings, inhibits investment, and retards economic development. In view of this, the paper suggests several policy measures in order to eliminate poverty and to stimulate food production and economic growth in Nigeria.

Obikeze, D.S. "Son Preference Among Nigerian Mothers: Its Demographic and Psychosocial Implications." *International Journal of Contemporary Sociology*, 25(1–2):55–63, January–April 1988.

"This study explores son preference among Nigerian mothers and its implications not only on desired fertility, but on other aspects of social life (e.g., socialization and positions based on gender). The data for the study come from the 1981–82 Nigerian Fertility Survey."

Obisesan, K.A. and A.A. Adeyemo. "Infertility and Other Fertility-Related Issues in the Practice of Traditional Healers and Christian Religious Healers in Southwestern Nigeria." *African Journal of Medicine and Medical Sciences*, 27(1–2):51–5, March–June 1998 (Department of Obstetrics and Gynaecology, College of Medicine, University of Ibadan, Nigeria).

Traditional healers have been an established source of health care delivery in Africa for centuries. Sources were surveyed (193 traditional healers and 99 Christian religious healers) with respect to infertility and some other fertility-related issues. The findings show that both types of healers believe that infertility is most commonly due to the past life of the woman, physical problems related to the womb or to male potency, and incompatibility between the man and the woman. Traditional healers also believed that being bewitched or being cursed could lead to infertility. Both groups of healers treat infertility by sacrifices, prayer and fasting, and timing of intercourse to coincide with the fertile period. Also, 61 percent of traditional healers and 87 percent of religious healers advise clients with infertility to do nothing, at least initially. For those clients seeking advice on preventing pregnancy, traditional healers tend to recommend herbal concoctions, beads, and rings, while Christian healers tended to recommend condoms, withdrawal method, and the safe period. Both groups are consulted on premarital sex, premarital conception, sex during pregnancy, and influencing the sex of an unborn baby. It was concluded that both traditional healers and Christian faith healers are involved with infertility and other fertility-related issues in their practices. There is an overlap in beliefs about causes and treatment of such conditions among both groups, although areas of differences in beliefs and practices are clearly identifiable.

Odi, M.A. *Minimizing Population Induced Food Gap in Developing Countries: Evidence from Southern Nigeria*. V. 31, Summary Report No. 46, Dakar, Senegal: Union for African Population Studies, Small Grants Programme, August 2000.

This study aimed at developing land tenure systems and socioeconomic factors that would minimize the growing food gap induced by rapid population growth in Nigeria. A total of 268 questionnaires from the personal interviews of 280 randomly selected farmers were properly completed and analyzed. Overall, results show that there is a significant difference in the magnitude and direction of the influence of land tenure systems and demographic and socioeconomic variables on the nature of food deficits at household, state, regional, and national levels. However, factors such as education, land inheritance, land purchase, size of female farm, and men and women's employment in agriculture as well as the adoption of improved technologies have been found to reduce the food gap. The establishment of family planning clinics, minimum marital age legislation, amendment of the land use decree/act of 1978, and a massive rural enlightenment campaign are suggested as measures geared towards mitigating food deficits.

Odimegwu, C.O. and A. Zerai. "Understanding the Proximate Determinants of Fertility of a Nigerian Ethnic Group." *Genus*, 52(3-4):67-87, July-December 1996.

"This paper uses data from a 1992-93 sample survey of 1,000 women aged 15-49 in selected areas of Imo State, Nigeria. The purpose of the survey was to get information/data on birth-spacing dynamics of the area. In this paper, we applied the basic Bongaarts model and its extended version to identify the proximate determinants of Igbo fertility. A total fertility rate [of] 6.7 births per woman is estimated from the model compared with a total fertility rate of 7.26 actually observed from the survey. When compared with earlier studies, it is shown that the principal proximate determinant of fertility in the area is no more lactational infecundability, but delayed marriage. Explanations for this change, future research needs and policy implications are discussed."

Ogunniyi, S.O. and B.L. Faleyimu. "Fertility after Ectopic Pregnancy in an African Population." *International Journal of Gynaecology and Obstetrics*, 30(3):245-8, November 1989 (Department of Obstetrics and Gynaecology, Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Nigeria).

Cases of ectopic pregnancy were studied retrospectively at the Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Nigeria, for the period from January 1, 1977 to June 30, 1987. The records of 108 patients who had at least one year of follow up were reviewed to determine their subsequent reproductive performance. Thirty-eight patients (35.9 percent) subsequently conceived, 15 (13.9 percent) had recurrent ectopic pregnancy, 21 (19.4 percent) delivered at term, and 40 (37 percent) remained secondarily infertile. Thirty patients were sterilized or using contraception.

Onemu, S.O. and I.N. Ibeh. "Studies on the Significance of Positive Bacterial Semen Cultures in Male Fertility in Nigeria." *International Journal of Fertility and Women's Medicine*, 46(4):210–4, July–August 2001 (Department of Obstetrics and Gynaecology, University of Benin Teaching Hospital, Benin City, Nigeria).

Objective: Early warning signals of altered reproductive potential may be very important in the prevention and management of male infertility. The presence of bacteria in semen (bacterisemia) may be an early warning signal. This was evaluated by determining the incidence of bacteria in semen of males with fertility problems in Benin City by culturing their semen. **Method:** Diluted semen samples were cultured on blood agar, chocolate agar, MacConkey agar, nutrient agar, and sabouraud dextrose agar slants for the isolation of microorganisms. Colonies of a single type of microorganism ($>10(3)$ cfu/ml) were picked for identification and sensitivity tests using antibacterial agents. Each semen sample was further processed for spermatozoal morphology and motility, presence of peroxidase-positive cells, and other accompanying cells. Correlative studies on the relationship between bacterisemia and semen/spermatozoa variables, such as total number and motility, were also conducted. **Results:** Pathogenic microorganisms were present in 78 of 163 (47.1 percent) semen samples. The microbial isolates were *Staphylococcus aureus* (35 or 43.7 percent), *Klebsiella* species (22 or 28.2 percent), *Escherichia coli* (9 or 11.5 percent), and *Candida albicans* (6 or 7.7 percent). The bacterial isolates were most sensitive to ceftazidime and pefloxacin, and least to amoxycillin and tetracycline. There was a positive correlation ($r = .9774$) between azoospermia in males and presence of *Candida albicans* in semen, as well as between the presence of microorganisms and poor semen quality ($r = .8563$), and the presence of microorganisms and reduced motility ($r = .8246$). **Conclusion:** Presence of pathogenic microorganisms in semen, which may be related to a breach in the integrity of the blood-testes barrier, may provide early warning signals of impairment of male fertility.

Ozumba, B.C. and Igwegbe, A.O. "The Challenge of Grandmultiparity in Nigerian Obstetric Practice." *International Journal of Gynaecology and Obstetrics*, 37(4):259–64, April 1992 (Department of Obstetrics and Gynaecology, University of Nigeria Teaching Hospital, Enugu).

A retrospective analysis of 733 Nigerian grandmultiparae seen at the University of Nigeria Teaching Hospital over a three-year period was conducted. A high incidence of grandmultiparity (11 percent) was noted, and most (62 percent) belonged to the lower socioeconomic class. Anemia, hypertensive diseases, abruptio placentae, breech presentation, and abnormal lie were significant complications of grandmultiparity. The incidence of multiple pregnancy, low birthweight babies, Caesarean deliveries, and perinatal deaths were markedly increased in the grandmultipara. Improvement in socioeconomic conditions of the populace, health education, and widespread practice of family planning are suggested to reduce the incidence of grandmultiparity.

Renne, E.P. "Shifting Boundaries of Fertility Change in Southwestern Nigeria." *Health Transition Review*, 6(Supplement):169–90, 1996.

“Anthropologists and demographers rely on distinctive methodologies and forms of evidence even while they share a common interest in explaining fertility change. This paper proposes a cultural anthropological approach that focuses on the process whereby meanings associated with practices and things are reinterpreted over time. Using the image of shifting boundaries of kinship relations, it examines changing interpretations of three fundamental aspects of social life—family land, marriage, and foster parenthood—in the Ekiti area of Southwestern Nigeria, which suggest an attenuation of the mutual obligations of extended kin. While these reinterpretations have moral associations that legitimate practices supporting fertility decline, political and economic uncertainties may counter this process.”

Sokari-George, E., J.O. Emeruem, and S.H. Dimkpa-Harry. “Rural Electrification: A Study of Socioeconomic and Fertility Change in Rivers State, Nigeria.” *African Study Monographs*, 12(4):167–83, December 1991.

In Nigeria, many rural communities are currently undergoing rapid economic and sociocultural transformations, including a decline in fertility. This paper contends that rural electrification is a major factor contributing to the changes, especially in family planning practice, which eventually results in fertility decline. Two communities were selected for case study: one with electricity and one without electricity. The data reveal that family planning is practiced more in the electrified community than the nonelectrified one, and there has been a significant decline in fertility.

Uchudi, J.M. “Spouses’ Socioeconomic Characteristics and Fertility Differences in Sub-Saharan Africa: Does Spouse’s Education Matter?” *Journal of Biosocial Sciences*, 33(4):481–502, October 2001 (Center on Population, Gender and Social Inequality, University of Maryland, College Park 20742–1315, USA).

Although the general objective of this study is to examine the extent to which spouses’ socioeconomic characteristics determine whether modern contraception is used and whether family limitation (the demand for no more children) is desired, its central goal is to evaluate the degree to which the net effect of a woman’s education on those fertility decisions is altered once a control is made for the level of schooling of the husband. Individual characteristics of spouses included as controls in this analysis are, on the one hand, women’s attributes relating to employment, age, parity, ethnic identity, and urban residence and, on the other hand, the occupation of the husband. Data used in this research are provided by DHS surveys conducted in 14 Sub-Saharan countries: Mali, Burkina Faso, Niger, Nigeria, Cameroon, Benin, Senegal, Ghana, Central African Republic, Kenya, Zambia, Zimbabwe, Namibia, and Rwanda. With two dichotomous outcome variables, logistic regression was used to estimate two nested models for each dependent variable and for each country covered by the study. DHS respondents used as units of analysis are women who were married (any kind of union) and nonpregnant at the time this national survey was conducted. The findings suggest that while an educated wife needs the support of an educated husband to state a preference for family limitation in contemporary Sub-Saharan Africa, controlling for husband’s education and other relevant covariates does little to undermine the evidence that woman’s advanced education and the adoption of modern family planning are positively related in the developing world.

Adolescent Reproductive Health

Adeyemo, M.O.A. and W.R. Brieger. “Dissemination of Family Life Education to Adolescents by Their Parents in Suburban Ibadan, Nigeria.” *International Quarterly of Community Health Education*, 15(3), 1994–95.

Family life education (FLE) is a process of imparting both factual knowledge about human development, sexual relationships, preparation for parenthood, pregnancy, contraception and STDs and also values, attitudes, and perceptions that will enhance health self-concepts and relationships. Although experts agree that the home is the best place to begin FLE, parents themselves are sometimes reluctant as discussion of these topics may be embarrassing or even taboo between generations. Parents also express concern that they may not be knowledgeable enough to handle FLE. The inhibitions on FLE in the home may be exacerbated by urbanization that reduces traditional social support systems. With this background, the investigators examined the nature and level of family life communication between parents and their adolescent children in homes in the suburban community of Apata in Ibadan, Nigeria. Of six FLE topics, the 253 families interviewed discussed only an average of three. Some parents did not feel competent and others felt that raising such issues might encourage undesirable behavior by the youth. Mothers were found to be the major initiators of FLE. A 12-point communication score was constructed based on potential FLE topics that could be discussed at home. The level of FLE communication was found to increase with parents' level of education. Greater time at home by parents was also associated with better scores. A positive perception of a parental role in FLE was reflected in higher scores. Strategies to increase parental knowledge on FLE topics as well as their self-efficacy in providing FLE is suggested, with special focus on the facilitating potential of schools and women's groups in the community.

Ajuwon, A.J., F. Fawole, and K. Osungbade. "Knowledge of AIDS and Sexual Practices of Young Female Hawkers in Truck and Bus Stations in Ibadan, Nigeria." *International Quarterly of Community Health Education*, 20(2):133–43, 2001.

This study explored the AIDS knowledge and sexual practice of 228 young female hawkers in four bus and truck stations in Ibadan, Nigeria. Fifty-one percent did not know that a girl could become pregnant during her first sexual encounter; 71.7 percent and 65.6 percent knew of the sexual and perinatal routes of transmission of HIV infection, respectively. However, a large proportion believed that the virus could spread through sharing eating utensils (60.4 percent) and toilets (59 percent) with infected persons. Forty-two percent had ever had sex; only 16.1 percent used a condom during the first episode of sex, while 83.9 percent did not. Sixty-two percent of sexually experienced hawkers were sexually active in the 3 months preceding the survey. The frequency at which they had sexual intercourse during the period ranged from 1–6 times. Thirty-two percent of these sexual encounters were protected from pregnancy, while 68 percent were not. Half (50 percent) of those who took a precaution to prevent pregnancy reported that their partners used a condom, few received injectable contraceptives (5 percent), and others took analgesics, purgatives, and self-made concoctions (45 percent). Four percent of sexually active subjects were raped in the course of trading in the stations. The authors propose appropriate recommendations to address risky sexual practices.

Alubo, O. "Adolescent Reproductive Health Practices in Nigeria." *African Journal of Reproductive Health/Revue Africaine de la Santé Reproductive*, 5(3):109–19, December 2001.

Adolescents have become a focal point of discussions of sexuality and reproductive health (RH) matters because they belong to a most active segment of the population and because of practical concerns in resolving problems, such as unintended pregnancy and STDs, including HIV/AIDS. Employing indepth interviews and focus group discussion techniques, this study of 2,510 respondents from four tertiary educational institutions in Nigeria examined various forms of RH practices, their origins, RH services available in the

institutions, and the role of gender relations in RH concerns. The findings show that respondents engage in a wide range of folk practices and do-it-yourself procedures to maintain personal hygiene and prevent and treat STDs as well as prevent and terminate unwanted pregnancies. These practices, which involve the use of everyday commodities such as lime, antacid, and other drugs in particular ways, are learned from and passed on through peers. The practices are considered more confidential and are preferred to the RH services in the institutions' clinics. There are obvious implications for avoidable complications, morbidity, and mortality, all of which need to be redressed through intervention.

Amazigo, U., N. Silva, J. Kaufman, and D.S. Obikeze. "Sexual Activity and Contraceptive Knowledge and Use Among In-School Adolescents in Nigeria." *International Family Planning Perspectives*, 23(1): 28–33, 1997.

Among 2,460 secondary school students in two southeastern Nigerian states, only 36 percent could correctly identify the most likely time for conception to occur. Female students were considerably more likely than males to understand the timing of conception (46 percent versus 25 percent); less dramatic differences emerged by students for residence and grade in school. Among students who supplied information about their sexual activity, 40 percent had had intercourse; the proportion who were sexually experienced climbed from 26 percent if 14-year-olds to 54–55 percent of 18–19-year-olds. While 36 percent of the young women had had sexual partners who were approximately their age, 25 percent had been involved with older businessmen; the young women reported that they have intercourse more frequently and are less likely to restrict intercourse to the safe period of their cycle when they are involved with older partners than when they have boyfriends their own age. Only 17 percent of sexually active students have ever used a contraceptive method other than abstinence. In focus groups and indepth discussions, students expressed a strong desire for better education about contraception and the consequences of sexual intercourse, and recommended that both schools and parents participate in educating young people about reproductive health.

Anochie, I.C. and E.E. Ikpeme. "Prevalence of Sexual Activity and Outcome Among Female Secondary School Students in Port Harcourt, Nigeria." *African Journal of Reproductive Health/Revue Africaine de la Santé Reproductive*, 5(2):63–7, August 2001.

Sexual activity among 534 Nigerian female secondary school students was studied using a self-administered questionnaire. Prevalence of sexual intercourse was 25.7 percent. There was no significant difference between the junior (48.2 percent) and senior (51.8 percent) students ($p > 0.05$). Seventeen (12.4 percent) students had initiated sexual intercourse before 11 years. The frequency of sexual exposure was high, with 34.3 percent of the students having intercourse more than once a week. The pregnancy rate among sexually active females was 27 percent, with a 24.8 percent rate of induced abortion. Early sexual health education beginning in primary school would be helpful in influencing the reproductive decisions and sexual behavior of the students, including contraceptive acceptance and usage, to avoid teenage pregnancy. Education of parents is also recommended in order to overcome the cultural barriers that discourage parents from providing sex education to their children at home.

Anonymous. "Civil Society Organizations Dialogue on Comprehensive Sexuality Education." *Grassroots Health News*, 2(2):6, July–December 2001.

On October 25–26, 2001, Action Health Incorporated conducted a national workshop in Abuja, Nigeria, aimed at bringing organizations together to discuss the new National Sexuality Education Curriculum for Upper Primary, Secondary, and Tertiary Institutions

before its implementation. This workshop was attended by executive directors and coordinators of nongovernmental organizations (NGOs) responsible for formulating program implementation strategies. The executive secretary of NERDC noted that 60 percent of HIV/AIDS infected are those at the age group 15–24 years. Hence, it is the concern of the government that the shift to sexuality education should be made comprehensive.

Barker, G.K. and S. Rich. “Influences on Adolescent Sexuality in Nigeria and Kenya: Findings from Recent Focus Group Discussions.” *Studies in Family Planning*, 23(3):199–210, May–June, 1992 (International Center on Adolescent Fertility, Center for Population Options, Washington, D.C.).

Continuing high rates of adolescent childbearing in Sub-Saharan Africa indicate a need for improved understanding of factors affecting adolescent sexuality. As traditional cultural influences on adolescent sexuality in Africa have diminished, peer interaction and modern influences have gained importance. To study peer interaction and societal factors and their impact on adolescent attitudes toward sexuality and contraception, the authors conducted a series of single-sex focus group discussions with in-school and out-of-school youth in urban and rural areas of Kenya and Nigeria in 1990. Out-of-school youth generally receive information on sexuality and family planning from peers (and the media), while in-school youth receive information in school, although not necessarily relevant information. Young women interviewed perceived unwanted early childbearing as something that affected them—an important precursor to family planning use. However, young people tended to have better information and more positive attitudes about induced abortion than about family planning.

Irinoye, O.O., B.A. Oyeleye, and A.N. Efeseke. “Precautionary Measures Used by Adolescents to Prevent Sexually Transmitted Infections and Pregnancy in Ile-Ife.” *Nigerian School Health Journal*, 12(1–2):18–26, 2002.

The study investigated the sexual behavior of adolescents and their knowledge of sexually transmitted infections (STIs), including HIV/AIDS. It also examined the extent to which they perceive themselves as being at risk of contracting STIs and their awareness of precautionary measures used to prevent such infections and pregnancy. Data were collected from 255 randomly selected adolescent students in a LGA in Osun State using a questionnaire. Data were analyzed using summary tables, percentages, and chi-square tests to determine differences in categories. Findings showed that age of sexual debut among adolescents continues to decrease and that adolescents engaged in sexual intercourse with multiple partners without appropriate use of precautionary measures to prevent STI and pregnancy. Subjects did not perceive correctly their risk status to STIs, and they were poorly informed about STIs, including HIV/AIDS. There was a significant difference between adolescents who had previous knowledge of STIs and who were sexually active and those without previous knowledge who were sexually active. A high percentage (69 percent) of the sexually active adolescents were aware of STIs. The study concluded that facilitating adolescents’ perception of their risk status to STIs and pregnancy and adoption of no or low-risk behavior to prevent both need to go beyond raising awareness in schools. Interventions that are school based should seek to promote appropriate cognition of risk status and skill-building programs for Nigerian adolescents to promote the delay of sexual debut and adoption of safe sexual practices when sexually active. (author’s comments)

Izugbara, C.O. “Tasting the Forbidden Fruit: The Social Context of Debut Sexual Encounters Among Young Persons in a Rural Nigerian Community.” *African Journal of Reproductive Health/Revue Africaine de la Santé Reproductive*, 5(2):22–9, August 2001.

What circumstances surround the initial sexual encounters of young persons? And what are their implications for adolescent sexual and reproductive health status? These questions, although rarely raised in reproductive health discourse, appear to be critical in broadening the systematic understanding of key issues that impose themselves on adolescent sexual and reproductive health. Against this background, the present study attempts to use the circumstances surrounding the debut sexual encounters of young persons in a rural Nigerian community as an entry point to understanding their vulnerability to sexual and reproductive health problems. Data for the study were gathered using indepth interviews of 180 persons aged 11–25 years. Emerging evidence shows that first sexual encounter took place under conditions that exposed young people to infections, disability, and even death. The study recommends that there is need to build on the clear evidence that good sex and reproductive health education for young persons delay the onset of sexual activity and make it safer when it eventually commences.

Makinwa-Adebusoye, P. “Sexual Behavior, Reproductive Knowledge and Contraceptive Use Among Young Urban Nigerians.” *International Family Planning Perspectives*, 18(2):66–70, 1992.

A high proportion of young urban Nigerians, both male and female, are currently sexually active: as many as 78 percent of males and 86 percent of females aged 20–24. According to the survey of more than 5,500 males and females aged 12–24, sexual intercourse appears to be sporadic and unstable; many of these young people, particularly males, have more than one sexual partner. Only about 15 percent of these young adults currently practice contraception. They also possess little information (or correct information) about reproductive biology; about three in five do not know that pregnancy is possible at first intercourse, and even fewer know that a woman’s pregnancy risk varies during the menstrual cycle. Friends, schoolmates, and the media are the most common sources of information about sexual or reproductive matters, while parents and guardians are the least common sources.

Moronkola, O.A. and T.E. Oso. “Sexual Behaviors of Female Undergraduates in a Nigerian University: Implications for School Health Education and Services.” *ICHPER–SD Journal*, 37(1):56–9, Spring 2001.

This study investigated sexual behaviors of female undergraduates attending a Nigerian university. A simple random sampling technique was used to select 25 percent of all resident undergraduates in the two female residence halls (a total of 500 respondents spread across all faculties in the university.) Through chi-square analysis, it was found that the period of having first sexual intercourse differed among the respondents, but most had it by the time they entered the university. Although respondents did not significantly engage in casual sex, 20.8 percent of them did, a concern in this age of HIV/AIDS. Similarly, respondents did not significantly engage in prostitution; but 17.8 percent did, also making them prone to HIV/AIDS. Health education, counseling, and treatment of students against STDs were recommended.

Moronkola, O.A. and O.M. Idris. “Sexual Health Knowledge, Determinants of Sexual Behaviour and Use of Contraceptives Among Female Secondary School Students in Ibadan, Nigeria.” *Nigerian School Health Journal*, 12(1–2):27–35, 2000.

The study focused on sexual health knowledge, determinants of sexual behavior, and the use of contraceptives among female secondary students in Ibadan, Nigeria. A self-developed validated questionnaire with 0.87 reliability was the research tool used to collect data from 900 senior secondary students from six (female only) secondary schools in Ibadan,

Nigeria. The respondents had significant sexual health knowledge, were significantly influenced to engage in sex, significantly engaged in negative sexual behavior, and significantly used contraceptives. Among others, the researchers believed that since only 53.3 percent were knowledgeable about sexual health, there is a need for health science/health education with components of sexuality education to be effectively introduced into the school system, which will greatly improve sexual health knowledge and behavior of students.

Obi, S.N., B.C. Ozuma, and A.K. Onyebuchi. "Pregnancy in Unmarried Adolescents in Nigeria." *International Journal of Gynaecology and Obstetrics*, 77(2):157–9, May 2002.

A prospective study was conducted between January 1999 and December 2000 to determine the characteristics and pregnancy outcomes of 198 consecutive unmarried adolescents seen at the maternity unit of the Federal Medical Center Abakaliki in Nigeria. Unmarried pregnant adolescents constituted about 10.7 percent of the 1,846 deliveries that occurred within the period of review. Most of these adolescents were students with older male partners, and the sexual relationship had come about as a result of material need, coercion, or abuse. The study showed that such teenagers leave school during pregnancy, with little hope of returning after the birth. It was also noted that there was a very low level of contraceptive awareness and use among these teenagers. Adoption was the preferred option for the pregnant teenagers, whose parents or male partner were unwilling to care for the expected baby. Consequently, a lack of financial support was pivotal to their willingness to consider adoption. Hence, sex education as well as access to reproductive health information and care will help reduce the occurrence of unwanted pregnancies and their lasting impact on adolescents, their families, and society as a whole.

Odimegwu, C.O., L.B. Solanke, and A. Adedokun. "Parental Characteristics and Adolescent Sexual Behaviour in Bida Local Government Area of Niger State, Nigeria." *African Journal of Reproductive Health/Revue Africaine de la Santé Reproductive*, 6(1):95–106, April 2002.

This study was conducted in the Bida local government area of Niger State, Nigeria, to examine how parental attributes influence adolescent sexual activity. Data were gathered through structured interviews with 400 adolescents, aged 12–24 years, using a three-stage random sampling procedure. Findings show that more than one third of the adolescents interviewed had sexual intercourse in the month preceding the survey. Less than one fifth of the sexually active adolescents were using a method of contraception to either prevent infections or avoid unwanted pregnancy. Further analysis confirmed the fact that adolescents with whom parents had discussed family life issues were less likely to be sexually active than those with whom parents had never discussed family life issues. The study also found a negative effect of family instability, especially economically. The need for parental empowerment to be able to cope with the challenges of adolescent life in Nigeria is also stressed since adolescents who have family life education from parents are less likely to be sexually active.

Odimegwu, C.O., M. Ojo, and C.N. Okemgbo. "Tradition and Health: the Predicament of Female Adolescents among the Igbo." *Journal of Cultural Studies*, 3(1):284–300, 2001.

This article is based on a systematic study of community knowledge and traditional practices as they affect the female child in Abakaliki area of Ebonyi State in the southeastern part of Nigeria. It explores the responses of 1,488 adults selected through a cluster sampling technique and interviewed by trained male and female interviewers in three LGAs of the state. A number of traditional practices that affect the female child include female genital mutilation, son preference, food inhibition, and the denial of female child rights. These

issues are examined elaborately from an empirical approach. On the basis of the findings, recommendations for designing community-based programs against negative and unjust traditional practices against the female child in the Abakaliki area are made.

Okonofua, F.E. "Factors Associated with Adolescent Pregnancy in Rural Nigeria." *Journal of Youth and Adolescence*, 24(4):419–38, August 1995.

A community-based case-control study to determine the risk factors associated with adolescent pregnancy was conducted in the rural community of Gbongan in southwestern Nigeria. In the study, 132 pregnant girls aged 20 years or less were compared with 131 nonpregnant girls of similar age. Information on their sociodemographic characteristics and those of their parents, their knowledge of reproductive health, and their practice of contraception were obtained by household confidential interviews and focus group discussions with parents and adolescents. Univariate analyses revealed a large number of potential risk factors, but after adjustment by logistic regression, only two factors remained significantly associated with pregnancy. These were being married (OR = 9.8) and having an income job as opposed to being an apprentice (OR = 4.7). In turn, having an income job was the only significant factor that predicted marriage in the logistic regression model (OR = 1.5). Both pregnant and nonpregnant adolescents had poor knowledge of and negative attitude toward contraception, and only a small percentage of them had ever used contraceptives. The authors conclude that pregnancy among adolescents in this community is mostly associated with completion of formal education at an early age by the girls, and their lack of knowledge of reproductive health. Measures that could reduce the high rate of pregnancies among adolescents in rural Nigeria include a program to encourage adolescents to continue formal and informal education, reproductive health education and services for adolescents, and appropriate legislation to discourage early marriage and pregnancy in the community.

Oladapo, M.M. and W.R. Brieger. "Reproductive Knowledge, Attitudes and Behaviour of Secondary School Students in Akure, Nigeria." *International Quarterly of Community Health Education*, 16(4), 1996–97.

Adolescents are subject to many life changes as their secondary sexual characteristics emerge. Contrary to parents' and society's wishes, these young people are more sexually active than previous generations and thus at greater risk of unwanted pregnancies, STDs, and related problems. Adolescents enrolled in school have the potential opportunity to learn ways to prevent these reproductive and sexual health problems, but there is concern as to whether schools are living up to this challenge. Therefore, this study was designed to learn whether adolescents in secondary school in the capital of Ondo State, Akure, have reproductive health education and are practicing healthy sexual behaviors. The study was based on a sample of 6 of the 28 secondary schools in Akure that fell under the jurisdiction of the Ondo State postprimary schools' management board. Focus was placed on pupils in the final years of both junior secondary school (JSS 3) and senior secondary school (SSS 3). Overall, 30 percent of the young people reported having sexual intercourse: 21 percent of females and 38 percent of males. Also, 39 percent in SSS 3 reported having had sex compared with 21 percent in JSS 3. Forty percent of students in coeducational school, compared with 19 percent in boys' school and 8 percent in girls' school, had sex. Respondents averaged only 11 points on a 33–point scale of reproductive health knowledge. Students in the senior classes and those in single sex schools had higher scores. The mass media were stated to be the major source of reproductive health knowledge; only one third reported that they had actually talked with someone about their reproductive health concerns. Attitudes toward premarital sex were more favorable among male students, pupils in mixed

sex schools, and those whose parents had lower levels of education. These findings suggest not only that the schools need to take a more active role in providing reproductive health education, but that this should be done in the junior secondary years, before most pupils become sexually active.

Otoide, V.O., F. Oronsaye, and F.E. Okonofua. "Why Nigerian Adolescents Seek Abortion Rather than Contraception: Evidence from Focus Group Discussions." *International Family Planning Perspectives*, 27(2):77–81, June 2001.

Nigerian adolescents generally have low levels of contraceptive use, but their reliance on unsafe abortion is high and results in many abortion-related complications. To determine why, it is important to investigate adolescents' perceptions concerning the risks of contraceptive use versus those of induced abortion. Data were collected through focus group discussions held with adolescents of diverse educational and socioeconomic backgrounds. All were asked about their knowledge of abortion and contraception, and each method of contraception was discussed in detail. In particular, youths were asked about contraceptive availability, perceived advantages of method use, side effects, and young people's reasons for using or not using contraceptives. Fear of future infertility was an overriding factor in adolescents' decisions to rely on induced abortion rather than contraception. Many focus group participants perceived the adverse effects of modern contraceptives on fertility to be continuous and prolonged, while they saw abortion as an immediate solution to an unplanned pregnancy, and therefore one that would have a limited negative impact on future fertility. This appears to be the major reason why adolescents prefer to seek induced abortion rather than practice effective contraception. The need to educate adolescents about the mechanism of action of contraceptive agents and about their side effects in relation to unsafe abortion is paramount if contraceptive use is to be improved among Nigerian adolescents.

Oyediran, K.A., G.P. Ishola, and A.A. Adewuyi. "Knowledge of Possible Pregnancy at First Coitus: A Study of In-School Adolescents in Ibadan, Nigeria." *Journal of Biosocial Science*, 34:233–48, 2002.

This paper discusses the reproductive health knowledge of Nigerian in-school adolescents, with special reference to pregnancy occurrence at first coitus. The data were derived from an Association for Reproductive and Family Health survey carried out in four secondary schools in Ibadan, Nigeria, between August and October 1995. A total of 828 students were interviewed. The results revealed that the majority of sexually active adolescents were not aware of the consequences of their actions. Religious affiliation and number of wives in a male adolescent's family as well as religion and marital status of a female adolescent's parents were found to influence adolescent knowledge of pregnancy probability at first coitus. This paper confirms earlier findings that the majority of Nigerian adolescents do not know the consequences of sex. Therefore, a clear-cut plan of action is needed to inform sexually active adolescents through an effective sex education program.

Temin, M.J., F.E. Okonofua, F.O. Omorodion, E.P. Renne, P. Coplan, H.K. Heggenhougen, and J. Kaufman. "Perceptions of Sexual Behavior and Knowledge about Sexually Transmitted Diseases Among Adolescents in Benin City, Nigeria." *International Family Planning Perspectives*, 25(4):186–190, 1999.

The level of sexual activity and the incidence of STDs are high among Nigerian adolescents, but use of reproductive health services is low. Information about their attitudes and experiences is needed for the design of youth-friendly programs. Twenty-four single-sex focus group discussions were conducted among young people aged 15–20 attending secondary schools in Benin City. The discussions explored the adolescents' perceptions of

sexual behavior among their peers, their knowledge of STDs, and their preferred means of preventing and treating STDs. The participants perceived that sexual activity is common among their peers. They noted that although physical attraction is the main reason for romantic relationships (which might include sex), the desire for material or financial gain is the primary motivation for sexual relationships. The young people had some knowledge about STDs, especially HIV and AIDS, but many believed infections were inevitable. When they had an STD, most went to traditional healers; they were unlikely to seek treatment from doctors because of the high cost, slow service, negative provider attitudes toward young people, and a perceived lack of confidentiality. The participants considered media campaigns as the best way to educate young people about STDs and condom use. Media campaigns to educate adolescents about risky behavior and condom use, educating parents about reproductive health and communication with adolescents, training medical providers in low-cost diagnosis and treatment techniques, and establishing youth-friendly services that emphasize sensitivity and confidentiality would be helpful in reducing high-risk sexual behavior and controlling the spread of STDs (including HIV and AIDS) among young people in Nigeria.

II. CONTRACEPTION

Choices

Adekunle, A.O., A.O. Arowojolu, A.A. Adedimeji, and O.A. Roberts. “Adolescent Contraception: Survey of Attitudes and Practice of Health Professionals.” *African Journal of Medicine and Medical Science* 29(3–4):247–52, September–December 2000 (Department of Obstetrics and Gynaecology, University College Hospital, Ibadan, Nigeria ykadekunle@skannet.com.ng).

In Nigeria, there is a persistent reluctance to provide adolescents with contraceptives, based largely on the premise that the culture does not support premarital sexual activity. However, several studies have revealed that a large number of adolescents are experiencing early sexual debut, some as early as 13 years. Furthermore, mortality resulting from termination of unwanted pregnancies is on the increase among Nigerian adolescents. The aim of this study is to assess the attitudes and practice of health workers in Ibadan regarding adolescent contraception. A structured questionnaire was administered to 735 health workers in selected hospitals and health facilities in Ibadan, Nigeria. Information relating to their practices and attitudes towards adolescent contraception was sought. The results revealed that while 58.9 percent of the respondents had counseled adolescents, only 30.7 percent had ever prescribed contraceptives for them. Among health workers that approved of family planning, 52.6 percent were favorably disposed to adolescent contraception, while 23.9 percent were not. It was observed that the 40.2 percent of health workers that did not approve of family planning are not favorably disposed to adolescent contraception. Health workers who counsel adolescents on the use of contraceptives are more likely than those who do not to approve of its use. In addition, those who approve of family planning are 12 times more likely than those who do not to have a favorable disposition toward adolescent contraception. Perhaps, if providers are more receptive to adolescent contraception, the services will be more accessible to those who are sexually active. This will no doubt stem the incidence of unwanted pregnancies in our community.

Adeokun, L., J.E. Mantell, E. Weiss, G.E. Delano, and T. Jagha. “Promoting Dual Protection in Family Planning Clinics in Ibadan, Nigeria.” *International Family Planning Perspectives*, 28(2):87–95, June 2002.

Integration of efforts to prevent HIV and STIs and of condom promotion into family planning (FP) services is urgently needed because of the escalating HIV epidemic in Sub-Saharan Africa. Counseling on dual protection—concurrent protection from unintended pregnancy and HIV and other STIs—and provision of the female condom were introduced in six FP clinics in Ibadan, Nigeria. Structured observations of interactions between clients and service providers, clinic service statistics, provider interviews, and other qualitative and quantitative methods were used to assess FP providers’ promotion of dual protection. Following intensive training, providers delivered dual protection counseling to a majority of clients and demonstrated the female condom to 80 percent of the new clients observed. Discussion of the sexual behavior of clients and their partners, of the relative ability of various contraceptives to protect against HIV infection and of how to negotiate condom use increased significantly, as did STI assessment. Providers’ internalization of the importance of HIV/AIDS prevention was crucial to promoting and sustaining the dual protection initiative. Condom purchases increased from a baseline of 2 percent of all FP visits in 1999 to 9 percent in January–June 2001. This increase came mainly from acceptance of the female condom, used either alone or in conjunction with another contraceptive. Integrating dual

protection counseling and female condom provision into FP services appears feasible, as is service providers' acceptance of dual protection objectives. While providers and clients are key to transforming FP to dual protection services, the attitudes and behaviors of clients' male partners need to be considered in gauging the success of the dual protection intervention.

Adinma, J.I. and A.O. Okeke. "The Pill: Perceptions and Usage Among Nigerian Students." *Advances in Contraception*, 9(4):341–9, December 1993 (Department of Obstetrics and Gynaecology, College of Health Sciences, Nnamdi Azikiwe University, Onitsha, Anambra State, Nigeria).

The knowledge and use of oral contraception were investigated in 498 students from five tertiary institutions in southeastern Nigeria. Awareness of the pill was high (92.2 percent) but usage was comparatively low (17.5 percent). Postcoital oral contraception was more often used (11.5 percent) than the other types. Perceptions about the risks of the pill varied: 46.4 percent of the students believed that it could damage the uterus, 41 percent reported that it could cause infertility, 31.7 percent believed that it caused amenorrhea, and only 14.9 percent of the students admitted ignorance of the risks of the pill. There was a lack of desire to use the pill in 72.3 percent of the respondents. Only 18.7 percent desired to do so, including students already using the pill. The most common source of information on contraception was peer groups (43.6 percent), while lectures and sex instructions constituted the least common source (11.2 percent). Poor information on the pill and ignorance were identified as the major factors militating against pill usage. Accordingly, the role of early and adequate sex and contraceptive education in improving pill usage in this population and developing countries in general is highlighted.

Adinma, J.I., A.O. Agbai, and B.O. Nwosu. "Contraceptive Choices Among Nigerian Women Attending an Antenatal Clinic." *Advances in Contraception*, 14(2):131–45, June 1998 (Department of Obstetrics and Gynaecology, Nnamdi Azikiwe University Teaching Hospital, Nnewi, Nigeria).

The factors determining the choice of contraception were studied among 230 pregnant women attending the antenatal clinic at Nnewi, Nigeria. There were 174 (52.1 percent) choices for the natural methods of contraception, 86 (25.7 percent) for the traditional methods, and 74 (22.2 percent) for the artificial methods. The most commonly chosen contraceptive methods were rhythm (95 or 28.4 percent) and Billings (79 or 23.5 percent), while the least was surgical contraception (4 or 1.2 percent). The barrier method was not chosen at all. The most common reason given for choice of contraception was safety (28.7 percent), followed by dislike of artificial methods (25.2 percent), the no-response rate was (29.1 percent). Other reasons given were ease of use (10 percent), husband's decision, (1.3 percent), fear of the complications of the artificial methods (13 percent), dislike of foreign body (2.6 percent), the method most understood (24.8 percent), need for further counseling (7 percent), and long-lasting (2.6 percent). The most common reason given against the use of the artificial methods of contraception was fear of its complications (31.9 percent), followed by preference for the natural methods (22.3 percent). Condom use decreased with increasing age, being highest at 16–20 years (37.5 percent) and lowest at 31–35 years (5.9 percent). When compared with other parity groups, the grandmultipara group (≥ 5) used the IUD (14.3 percent), injectable contraception (4.8 percent), and other traditional methods (breastfeeding and abstinence) (28.5 percent), and did not use the rhythm method. Women of the lowest social class most commonly chose other traditional methods (57.1 percent) and never chose the Billings method. Women who desired 1–3 children most commonly chose the pill (23.5 percent) or withdrawal method (23.5 percent), while women

who desired 4–10 children most commonly chose the rhythm and Billings methods. There was no difference in choice of method of contraception for the various religious denominations, although the artificial methods were less commonly chosen by Catholics (4.1 percent), compared with Anglicans (33 percent) and other Christian denominations (33.3 percent). The physician was the most common source of information for the choosers of the condom (18.9 percent), surgical contraception (2.7 percent), and the pill (8.1 percent); and the nurse for injectable contraception (4.9 percent). The most common source of information among choosers of the rhythm method was the electronic media (40.5 percent), print media (34.9 percent), and peer group (34.4 percent). Lecture/sex instruction was the most common source of information among choosers of the Billings (35.5 percent) and withdrawal (22.6 percent) methods, while the no-response rate on source of information on contraception was highest among choosers of the Billings method. There is a need to bridge the gap in contraceptive information by redirecting counseling strategies and restructuring family planning programs to dispel negative perceptions and encourage informed choice of effective family planning methods.

Adinma, J.I. and B.O. Nwosu. “Family Planning Knowledge and Practice Among Nigerian Women Attending an Antenatal Clinic. *Advances in Contraception*, 11(4):335–44, December 1995 (Department of Obstetrics and Gynaecology, Nnamdi Azikiwe University Teaching Hospital, Nnewi, Nigeria).

This study investigates family planning activity for 308 Nigerian women attending an antenatal clinic. Family planning awareness was present in 234 women (76 percent) and practice occurred in 168 women (54.5 percent). Proposal to practice family planning occurred in 66 of 137 women who had never used contraception while 69 (22.4 percent) did not intend to practice family planning. The best known type of contraception was the condom (182 or 59.1 percent); the most commonly used, the safe period (rhythm) (73 women or 23.7 percent). The Billings method was the most commonly proposed type (72 women or 23.4 percent). Knowledge of the beneficial effects of the chosen method of contraception was claimed by 102 women (43.6 percent), while 33 (14.2 percent) conceded ignorance. Similarly, 81 women (34.6 percent) claimed to know the adverse effects of their chosen method of contraception, while 119 (50.9 percent) admitted ignorance. The most common source of information on contraception was the printed media (112 or 47.9 percent), while the least common was lecture/sex instruction (27 or 11.5 percent). Lack of adequate information and ignorance are key factors militating against family planning practice in Nigeria. Family planning activity in Nigeria would be improved by wider dissemination of information on family planning through public lectures and the electronic media, training of family planning counselors to facilitate community coverage, universal entrenchment of family planning counseling into routine antenatal clinic activities, and integration of private medical centers into the national family planning service.

Aja, G.N., M.A. Nwangwa, and I.N. Egwu. “Knowledge, Attitude and Practice of Family Planning in Rural Communities in Nigeria.” *Asia-Pacific Journal of Public Health* 1995;8(2):85–90 (Department of Community Health, College of Medical Sciences, University of Calabar, Nigeria).

Maternal and infant mortality rates, coupled with a high population growth rate, are unacceptably high in Nigeria. Recently, the Nigerian government endorsed the promotion of reproductive health, including family planning, through maternal and child health services. The Ohaozara local government area (LGA) introduced a five-year action plan (FYAP) in 1989. To appraise the Ohaozara FYAP, 600 persons stratified by geographic location and sex were interviewed in three randomly selected autonomous communities in the Ohaozara LGA

to determine their knowledge, attitudes, and practices. The findings in this study showed a high awareness level with a moderately positive attitude and generally low level of practice. Comprehensive reproductive health education, budgetary increase, evaluation of FYAP, and program coordination are recommended.

Anate, M. "Factors Influencing Family Planning Use in Ilorin, Nigeria." *East African Medical Journal*, 72(7):418–20, July 1995 (Department of Obstetrics and Gynaecology, Unilorin Teaching Hospital, Kwara State).

Over a three-year period (1990–92), the factors influencing the use of family planning among the 7,902 clients attending the Planned Parenthood Federation of Nigeria clinic in Ilorin were studied. The patients were predominantly females (74.1 percent). Urban residents (66.1 percent), educated clients (77.4 percent), clients aged 25–39 years (73 percent), and those with three or more children (74.8 percent) are more likely to use family planning. More Moslems (61 percent) than Christians (39 percent) appear to embrace family planning practice in Ilorin.

Arowojolu, A.O. and A.O. Adekunle. "Perception and Practice of Emergency Contraception by Postsecondary School Students in Southwest Nigeria." *African Journal of Reproductive Health*, 4(1):56–65 April 2000 (Department of Obstetrics and Gynaecology, College of Medicine, University College Hospital, Ibadan, Nigeria).

A survey of 1,500 students in postsecondary institutions in southwest Nigeria showed that the concept of emergency contraception (EC) was well known. Respectively, 32.4 percent, 20.4 percent, and 19.8 percent knew that combined pills, progesterone only pills, and intrauterine contraceptive device (IUD) were usable for EC, while 56.7 percent mentioned the use of traditional methods. Only 11.8 percent had ever used either pills or IUDs and 10.7 percent had used a traditional method. Few students (11.5 percent and 2.3 percent respectively) knew the correct timing of EC pills and IUDs. The respondents reported varying circumstances under which EC was indicated but the majority cited condom breakage and sexual assault. The popular media represents the most common source of information while hospitals/clinics were the most common sources of procurement. About 37 percent of the respondents planned to use EC in the future, while 58 percent would not and 4.7 percent were uncertain. Reasons for these responses were explored.

Briggs, L.A. "Postprimary School Teachers' Viewpoint on Reproductive Health and Contraceptive Practice Among Schoolgirls in Port Harcourt, Nigeria." *Journal of the Royal Society of Health*, 114(5):235–9 (Department of Health and Physical Education, Rivers State College of Education, Port Harcourt, Nigeria), October 1994.

The viewpoint of secondary school teachers on reproductive health, specifically their attitude towards contraceptive practice among sexually active schoolgirls, and their general opinion on teenage pregnancy was examined. A sample survey of teachers was conducted at all the registered girls and mixed postprimary schools in Port Harcourt. A substantial proportion of teachers was of the opinion that sexually active schoolgirls should not be encouraged to use contraceptives because they damage reproductive organs. A greater proportion (33.8 percent) of teachers was also of the opinion that schoolgirls should abstain from sex until they are married. This was closely followed by the suggestion that sexually active girls should use contraceptives (20.8 percent). The majority (48.3 percent) of teachers, however, advocated a sex education program in schools in order to prevent unwanted pregnancy.

Briggs, L.A. "Parents' Viewpoint on Reproductive Health and Contraceptive Practice Among Sexually Active Adolescents in the Port Harcourt Local Government Area of Rivers State, Nigeria." *Journal of Advanced Nursing*, 1998 Feb;27(2):261–6 (Department of Physical Education, Rivers State College of Education, Port Harcourt, Nigeria).

The viewpoint of parents on reproductive health, specifically their attitude towards contraceptive use among sexually active adolescent daughters, and their general opinion on adolescent pregnancy, was examined. A sample survey of parents of pregnant adolescents in Port Harcourt was conducted. A greater proportion (79.1 percent) of parents did not favor the use of contraceptives by sexually active adolescents because according to their parents, contraception kills. Also, most (87.8 percent) parents did not usually discuss sexual matters with their adolescent girls. However, the majority (93.2 percent) of parents would want a sex education program in schools in order to prevent unwanted pregnancy.

Emuveyan, E.E., H. Oshinyemi, G. Durojaiye, and R.A. Dixon. "Contraceptive Choice in Lagos, Nigeria." *West African Journal of Medicine*, 9(2):129–34, April–June 1990 (Department of Obstetrics and Gynaecology, College of Medicine, University of Lagos).

Among 1,266 contraceptive acceptors (median age 30 years, median parity 4.5) attending a family planning clinic, mostly after referral from the postnatal clinic, two thirds chose the IUD; almost all the remainder chose oral contraception. Oral contraception was, however, the main choice among women of parity 0 or 1. A definite intention to have no more children was given by none of the women of parity 3 or under, and only by 15 percent of those of parity 8 or more, so that child spacing was the main reason for accepting contraception. By 12 months, the discontinuation rate among oral contraceptive users was 17 percent (IUD, 11 percent) of which 11 percent (IUD, 6 percent) was for personal reasons or to plan pregnancy, 4 percent (IUD, 5 percent) through adverse effects, and 0.6 percent (IUD, 0.8 percent) through accidental pregnancy.

Fakeye, O. and O. Babaniyi. "Reasons for Non-Use of Family Planning Methods at Ilorin, Nigeria: Male Opposition and Fear of Methods." *Tropical Doctor*, 19(3):114–7, July 1989.

This study reports the main reasons given for non-use of contraception by nonpregnant women aged 15–44 years, who are at risk of unplanned pregnancy and living in the Ilorin LGA of Kwara State, Nigeria. Six hundred and forty-six women were derived from a stratified cluster sample and interviewed using a questionnaire. Almost one third (31.4 percent) of the respondents gave male opposition to family planning as the reason for current non-use. Another 13.3 percent expressed fear of methods, 6.3 percent did not want to use contraception until the first child was born, and 13.6 percent until the desired number of children were born. Sociodemographic variables, including age, educational level, religion, and residence were reported as reasons for non-use. Other important findings included a high awareness of, low availability of, or poor accessibility to contraceptive methods. Short and long-term intervention strategies using information, education and communication materials are proposed to combat low levels of contraceptive use in this area.

Fakeye, O. "Contraception with Subdermal Levonorgestrel Implants as an Alternative to Surgical Contraception at Ilorin, Nigeria." *International Journal of Gynaecology and Obstetrics*, 35(4):331–6, August 1991 (Department of Obstetrics and Gynaecology, University of Ilorin Teaching Hospital, Nigeria).

Acceptability and social characteristics of a cohort of Norplant, IUD, pill and depo-medroxyprogesterone acetate (DMPA) acceptors who were seen at the University of Ilorin family planning clinic over a 10-week period of the preintroductory clinical trial of Norplant are compared. Findings indicate that Norplant and DMPA are adopted as an alternative to

sterilization by women advanced in reproductive age and of high parity. The pill and IUD are adopted mainly as birth-spacing methods. Women's education, but not previous use of a contraceptive method, influenced the adoption of Norplant. The continuation rate at 12 months, a measure of acceptability, was highest (93.7 per 100 women) for Norplant, 77.9 for the IUD, 46.7 for DMPA, and 27.7 for the pill, per 100 women. The need to address the high family size norms in the African subregion is discussed.

Fakeye, O. "Reproductive Characteristics and Contraceptive Method Choices of Nigerian Women Requesting Terminal Fertility Control." *International Journal of Fertility*, 37(1):19–23, January–February, 1992 (University of Ilorin Family Planning Program, Nigeria).

A choice of a safe and acceptable contraceptive method is an important concern for women who have completed their childbearing intentions. This paper focuses on 557 women (mean age 35.9 years, mean number of living children 5.8 +/- 1.4, and mean number of living sons 3.1 +/- 1.3) who indicated some desire to limit childbearing, and were seen at the University of Ilorin Teaching Hospital family planning clinic in 1986–7. During this period, a wide and free choice of contraceptive methods, including the new subdermal levonorgestrel implant method (Norplant) and female surgical sterilization, was offered. Contraceptive method choices of women requesting terminal fertility control are IUD (56 percent), injectable contraceptives (15.3 percent), female sterilization (11.5 percent), oral contraceptives (8.6 percent), Norplant (8.1 percent), and others (0.5 percent). Comparing terminal and nonterminal contraceptors, almost equal proportions adopted the IUD (56 percent versus 60.5 percent), while terminal contraceptors adopted the injectable contraceptives and Norplant in significantly higher proportions. Within subgroups by contraceptive method, mean age and mean number of living children and of sons are not significantly different, although younger women tend to adopt the pill. Method choice of Norplant and tubal ligation was favored by previous contraceptive use, but not by spousal approval. Years of education had a positive influence on the choice of Norplant. The program implications of these findings regarding selective counseling of terminal contraceptors, provision of long-lasting reversible contraceptive methods, and facilities for surgical sterilizations for men and women are discussed.

Jinadu, M.K., S.O. Olusi, and B. Ajuwon. "Traditional Fertility Regulation Among the Yoruba of Southwestern Nigeria I; A Study of Prevalence, Attitudes, Practice and Methods." *African Journal of Reproductive Health*, 1(1):56–64, March 1997 (Department of Nursing, College of Health Sciences, Obafemi Awolowo University, Ile-Ife, Nigeria).

This study was conducted among Yoruba women and traditional healers with the aim of identifying and describing the practice, preparation, and administration of traditional contraceptives. The data were obtained in 1990 from a random sample of 1,400 women of childbearing age and 42 traditional healers in Nigeria's Oranmiyan area, using questionnaires and indepth interviews. Findings revealed that knowledge of traditional contraceptives is nearly universal among the Yoruba population, and traditional contraceptive prevalence is 7.1 percent. The use of traditional contraceptives was significantly more common among uneducated women and among women aged 20–29. Findings also revealed the existence of four main varieties of traditional contraceptive devices, the methods of preparation of the traditional contraceptives, varieties of herbal and animal products used, methods of administration, and taboos against usage. The easy accessibility of traditional medical practitioners and the belief that traditional contraceptive devices are devoid of complications, especially among those experienced with modern contraceptive devices, were the main reasons women cited for patronizing the traditional

practitioners. The paper concludes with policy implications for family planning programmers in Nigeria.

Jinadu, M.K. and B. Ajuwon. "Traditional Fertility Regulation Methods Among the Yoruba of Southwestern Nigeria II; A Prospective Study of Use-Effectiveness." *African Journal of Reproductive Health*, 1(1):65–73, March 1997 (Department of Nursing, College of Health Sciences, Obafemi Awolowo University, Ile-Ife, Nigeria).

This study investigated the effectiveness of traditional contraceptives commonly used by Yoruba women and the attitudes of users and non-users towards family planning services and contraceptives in Nigeria. One hundred and forty-two married women aged 19–40 were followed for 18 months. Seventy-two of the women were identified as current users of four types of traditional contraceptives (ring, incision, soup, and waistband types), and 70 women did not use any type of contraceptive. The users and non-users were matched on sociodemographic characteristics. Attitudes of the users and non-users towards fertility regulation were investigated using focus group discussions. The study found that 5.6 percent of the users and 34.5 percent of the non-users became pregnant during the follow-up period. Contraceptive failure was experienced by users of the waistband and ring methods. The main barriers to the use of modern contraceptives as described by women were the negative attitudes of men and the fear of side effects.

Konje, J.C., F. Oladini, E.O. Otolurin, and O.O. Ladipo. "Factors Determining the Choice of Contraceptive Methods at the Family Planning Clinic, University College Hospital, Ibadan, Nigeria." *British Journal of Family Planning*, 24(3):107–10, October 1998 (Fertility Research Unit, Department of Obstetrics and Gynaecology, University College Hospital, Ibadan, Nigeria).

In a study of 2,000 women volunteers seeking contraceptive services at the family planning clinic (FPC) of the University College Hospital, Ibadan, Nigeria, 66.2 percent chose the IUD, making it the most common method of contraception. Factors influencing choice of contraceptive methods were advice from friends and family members, intended duration of use, and information from the media. Ignorance, fear, and unfounded cultural beliefs were factors responsible for the delay in seeking contraceptive advice. The mass media were an important source of information for most of the women. The conclusion is that the IUD is the contraceptive of choice in the clinic because of the highly selective nature of the clients. In order to provide a service with a broader clientele, it is suggested that other priority reproductive health services be incorporated, such as cervical and breast cancer screening, prevention and treatment of reproductive tract infections, and STDs, including HIV/AIDS.

Mantell, J.E., S. Hoffman, E. Weiss, L. Adekun, G. Delano, T. Jagha, T.M. Exner, Z.A. Stein, Q.A. Karim, E. Scheepers, K. Atkins, and E. Weiss. "The Acceptability of the Female Condom: Perspectives of Family Planning Providers in New York City, South Africa, and Nigeria." *Journal of Urban Health*, 78(4):658–68, December 2001 (The HIV Center for Clinical and Behavioral Studies, New York State Psychiatric Institute and Columbia University, New York, NY, 10032, jmantell@cnylvz.com).

This article seeks to fill the gap in female condom acceptability research by examining family planning (FP) providers' attitudes and experiences regarding the female condom in three countries (South Africa, the United States, and Nigeria) to highlight providers' potential integral role in the introduction of the female condom. The case studies used data drawn from three independent projects, each of which was designed to study or to change FP providers' attitudes and practices in relation to the female condom. The case

study for New York City used data from semistructured interviews with providers in one FP consortium in which no special female condom training had been undertaken. The data from South Africa were drawn from transcripts and observations of a female condom training program and from interviews conducted in preparation for the training. The Nigerian study used observations of client visits before and after providers were trained concerning the female condom. In New York City, providers were skeptical about the contraceptive efficacy of the female condom, with only 8 of 22 providers (36 percent) reporting that they would recommend it as a primary contraceptive. In South Africa, providers who had practiced insertion of the female condom as part of their training expressed concern about its physical appearance and effects on sexual pleasure. However, they also saw the female condom as a tool to empower clients to increase their capacity for self-protection. Structured observations of providers' counseling interactions with clients following training indicated that Nigerian providers discussed the female condom with clients in 80 percent of the visits observed. Despite the lack of a uniform methodology, the three case studies illuminate various dimensions of FP providers' perceptions of the acceptability of the female condom. FP providers need to be viewed as a critical factor in female condom acceptability, uptake, and continued use. Designing training programs and other interventions that address the sources of provider resistance and that enhance providers' skills in teaching female condom negotiation strategies may help to increase clients' use of the female condom.

Nwoha, P.U. "The Immobilization of all Spermatozoa In Vitro by Bitter Lemon Drink and the Effect of Alkaline pH." *Contraception*, 46(6):537–42, December 1992 (Department of Anatomy and Cell Biology, College of Medical Sciences, Obafemi Awolowo University, Ile-Ife, Nigeria).

This study investigated the effects of increase in temperature and in pH of Coca-Cola, Afri-Cola, Pepsi-Cola, and Krest bitter lemon drinks (soft drinks) produced in Nigeria on the in vitro motility of spermatozoa. Semen was collected from seven men, average age 28 years, of proven fertility, after 5 days' abstinence from sexual intercourse. The temperature and pH of the drinks were adjusted from 22° C (room) to 37° C, and pH 2.4 (acid) to 7.5 (alkaline), respectively. The mean percent motility of spermatozoa in the adjusted and unadjusted drinks was compared for significant differences at the 1 percent level using the student's t-test. The results showed no significant differences in mean percent motility in the drinks at 22° C and at 37° C. The mean percent motility in all the drinks, except Coca-Cola, was significantly greater at alkaline than at acid pH; for Coca-Cola, motility was significantly greater at acid than alkaline pH. Of the drinks, Krest bitter lemon (unadjusted) immobilized all spermatozoa within 1 minute of addition. Two conclusions were drawn: alkalinity decreases the spermicidal action of all drinks except Coca-Cola, and Krest bitter lemon may achieve very high efficacy if used as postcoital douche, especially in the impoverished, densely populated Third World.

Obi, S.N., and S.E. Anya. "Experience with the Intrauterine Device (TCU–380A) in Enugu, Eastern Nigeria." *International Journal of Gynaecology and Obstetrics*, 71(3):271–3, December 2000.

An 8-year retrospective review was conducted to examine the acceptability and pattern of IUD use among 9,768 clients at the family planning clinic of University of Nigeria Teaching Hospital, Enugu, eastern Nigeria. It was observed that the copper T–380A (TCU–380A) accounted for two thirds of the contraceptive use among 9,768 clients, among women aged 25–39. Also, there was some relationship between social class and parity, with clients of higher social classes (I and II) more likely to be of low parity than those in the lower classes (IV and V). Menorrhagia was the most common complication and the reason for

removal of the device in 2.3 percent of all IUD users. Results have also shown that the rate of accidental pregnancy was low among users. It is concluded that the long-lasting effectiveness, acceptability, and low morbidity associated with TCU-380A made it a suitable alternative to tubal sterilization.

Obionu, C.N. "Family Planning Knowledge, Attitude and Practice Amongst Males in a Nigerian Urban Population." *East African Medical Journal*, 75(3):131-4, March 1998 (College of Medicine, University of Nigeria Teaching Hospital, Nigeria).

A study to investigate men's knowledge, attitudes, and practices of family planning was carried out in Enugu, in southeastern Nigeria between September and December, 1996. A total of 380 adult working males was studied. A high proportion of the respondents had knowledge of and possessed positive attitudes toward family planning, even though a lesser proportion actually used family planning methods. Ninety percent of the respondents accepted the decision that the number of children in the family should be made by the couple. While over 32 percent of the men believed that the wife alone should use family planning methods, only 10 percent thought it was the husband's role to use family planning methods. There is need for the present integrated national maternal and child health/family planning programs to be adapted for use by men.

Obisesan, K.A., A.A. Adeyemo, and B.O. Fakokunde. "Awareness and Use of Family Planning Methods Among Married Women in Ibadan, Nigeria." *East African Medical Journal*, 75(3):135-8, March 1998 (Department of Obstetrics and Gynaecology, University College Hospital, Ibadan, Nigeria).

A study of awareness and use of family planning methods among 1,188 married women aged 15-40, attending antenatal clinics in four different locations, conducted in Ibadan, Nigeria, between May to December, 1995, is reported. Most respondents (94.3 percent) were aware of the use of family planning but only 12 percent had ever visited a family planning clinic. The awareness of specific methods was 82.6 percent for condoms, 75.7 percent for oral contraceptives, 75.5 percent for injectable contraceptives, and 65.3 percent for IUDs. Current use of family planning methods was low, with 10 percent using withdrawal, 8.1 percent using oral contraceptives, 5.2 percent using IUDs and 4.7 percent using condoms. Perceived constraints to the use of family planning methods included husband's opposition, fear of complications, and perceived insufficient knowledge about family planning methods. It is concluded that there is a knowledge-practice gap in the use of family planning methods among married women in Ibadan, Nigeria. Improved education strategies and improved access to services are needed to solve these problems.

Obisesan, K.A., A.A. Adeyemo, J.U. Ohaeri, F.A. Aramide, and S.I. Okafor. "The Family Planning Aspects of the Practice of Traditional Healers in Ibadan, Nigeria." *West African Journal of Medicine*, 16(3):184-90, July-September 1997 (Department of Obstetrics and Gynaecology, University of Ibadan, Nigeria.)

The family planning aspects of the practice of traditional healers in Ibadan, a large city in southwest Nigeria, was investigated by means of a questionnaire survey of 193 traditional healers. The findings revealed that between 13 percent and 53 percent agreed with certain cultural beliefs that tend to increase fertility and that their perceptions of ideal child spacing is most commonly two to three years. Only 13 percent think that a couple should have a specified number of children; a large proportion think that the number should be "as God wills" (42 percent) or as many as the couple has resources with which to cope (42 percent). Nearly all think that traditional healers and orthodox health professionals should work together in the area of family planning. While most of them recommend traditional

methods of contraception (such as beads and herbs) to their clients, up to 22 percent recommend modern family planning methods, such as condoms and oral contraceptives. The implications of these findings for family planning programs and the possibility of the involvement of traditional healers in the promotion of modern family planning methods are discussed.

Odimegwu, C.O. "Family Planning Attitudes and Use in Nigeria: a Factor Analysis." *International Family Planning Perspectives*, 25(2): 86–91, 1999.

Studies have found an association between attitudes toward family planning and the use of contraceptive methods, but the relationship between these two has not been critically examined and quantified. A randomly selected sample of 927 married men and women living in urban and rural areas of Nigeria were asked how strongly they agreed with 26 attitudinal statements regarding family planning. A factor analysis was used to measure the association between the respondents' attitudes toward family planning and their contraceptive practices. Respondents' perceptions of family planning were associated with contraceptive use. Those who approved of family planning were twice as likely to be using contraceptives as respondents who disapproved. Furthermore, respondents who communicated with their spouse about family planning were 3 times more likely to be using a contraceptive than those who did not. Women who agreed with statements supporting girls' education and discouraging early marriage were 3 times more likely to be practicing contraception than women who disagreed. Contraceptive practice was also more common among men who were exposed to family planning through the media than among those who were not. Factors found to be associated with contraception should be utilized by the Nigerian government in its family planning awareness campaign. Changes in attitudes towards contraception among Nigerians may increase the practice of contraception.

Ogedengbe, O.K., O.F. Giwa-Osagie, K. Nwadiani, and C. Usifoh. "Failed Contraception in Nigerian Women: Outcome of Pregnancy and Subsequent Contraceptive Choice." *Contraception*, 44(1):83–8, July 1991 (Department of Obstetrics and Gynaecology, College of Medicine, University of Lagos, Nigeria).

The outcome of pregnancy in 56 patients who had contraceptive failure out of the 5,431 new acceptors at the family planning clinic of the Department of Obstetrics and Gynaecology, College of Medicine, University of Lagos, between January 1, 1981, and December 31, 1989, were analyzed. There were 40 IUD, 6 oral contraceptive, and 4 injectable contraceptive failures. Three patients had had voluntary surgical contraception (VSC) and 3 used barrier methods. The mean \pm standard deviation age and parity were 32.2 \pm 4.4 years and 4.4 \pm 1.9, respectively. There were 17 live births (30.1 percent), 34 terminations of pregnancy (56.6 percent), and 3 spontaneous abortions (5.2 percent). Two patients were lost to follow up (3 percent). There was neither any statistically significant difference in the outcome of pregnancy between patients with 5 or more children and less than 5 children ($p > 0.05$), nor between patients less than 31 years of age and those older. Half of the patients who had used the IUD continued with the method. Seven patients subsequently requested VSC. None of the patients using the injectable contraceptive or barrier methods continued with the method ($p > 0.05$).

Okpani, A.O. and J.U. Okpani. "Sexual Activity and Contraceptive Use Among Female Adolescents—A Report from Port Harcourt, Nigeria." *African Journal of Reproductive Health*, 4(1):40–7, April 2000 (Department of Obstetrics and Gynaecology, College of Health Sciences, University of Port Harcourt, Nigeria).

Seven hundred and sixty-eight randomly selected, single, senior secondary school girls from Port Harcourt (mean age 16.32 years) were surveyed on aspects of sexual activity and contraceptive use. Two hundred and ten pregnancies (24 deliveries and 186 induced abortions) had occurred in 142 out of 605 girls (78.8 percent) who admitted being sexually exposed. The mean, modal, and youngest ages of initiation into sexual activity were 15.04, 15, and 12 years, respectively. At the time of the survey, 190 girls (24.7 percent) were sexually active and 74.2 percent of their male consorts were older working men, suggesting financial gains as a motive for the girls' sexual activity. Other findings were high awareness (72.4 percent) of the relationship between sexual activity and STDs; a rather low level (56 percent) of knowledge of effective contraceptive methods, and limitation of contraceptive method use by sexually active girls, largely to the rhythm and withdrawal methods. Exposure to multiple sexual partners and a high level of parental approval of subjects' use of contraception were also present. In view of the findings, it is suggested that active efforts to promote sex education and contraceptive use should be intensified among Nigerian adolescents.

Oladosu, M. and O. Ladipo. "Consistent Condom Use Among Sex Workers in Nigeria." Washington, D.C., Population Services International (PSI), Research Division, PSI Research Division Working Paper No. 39, 24 pp., 2001.

This study examines factors influencing consistent condom use among sex workers in Nigeria. Such information can help improve the design of intervention campaigns to reduce the spread of HIV among high-risk groups and the general population. The authors used a nationally representative sample of 2,578 sex workers collected in 1998. This study uses logistic regression to predict the effect of exposure to advertising for Gold Circle and Cool brand condoms (two popular socially marketed brands), knowledge of HIV transmission, number of regular partners, self-efficacy, risk perception, and demographic variables on consistency of condom use. The findings suggest that most sex workers lived in urban (84 percent) areas, were below age 30 (74 percent), and over half had secondary or higher education (55 percent). Most respondents had been involved in sex work for two or less years (73 percent) and had a regular partner (72 percent). Although the majority of sex workers were worried about AIDS (81 percent), only 55 percent reported consistent condom use in the last five sex acts. Among sex workers who usually asked clients to use condoms, 76 percent used condoms in the last five sex acts, compared with 8 percent of those who do not ask all clients to use condoms. After controlling for background variables and other factors, multivariate results suggested that sex workers who had been exposed to two or more sources of advertising for Gold Circle and Cool condom brands were about twice as likely to consistently use condoms than those who did not see any advertisements ($p < 0.001$). Sex workers who knew of two or more modes of HIV transmission were 44 percent more likely to consistently use condoms than those who had no knowledge ($p < 0.05$). Sex workers who worried about contracting HIV were twice as likely to consistently use condoms than those who were not worried ($p < 0.001$). The most important predictor of consistent condom use was self-efficacy. Sex workers who asked all their clients to use condoms were 39 times more likely to consistently use condoms than those who did not ask all their clients to use condoms. Program interventions that use multiple communication media to increase condom brand awareness, to provide information about the modes of HIV transmission and its consequences, and to increase self-efficacy can help improve consistency of condom use among Nigerian sex workers. This may reduce the likelihood of HIV transmission to other populations.

Olatinwo, A.W., M. Anate, O.R. Balogun, and M.O. Alao. "Intrauterine Contraceptive Device (IUCD): Sociodemographic Characteristics of Acceptors, Acceptability and Effectiveness in a Teaching Hospital in Nigeria." *Nigerian Journal of Medicine*, 10(1):14–7, January–March, 2001 (Department of Obstetrics and Gynaecology, University of Ilorin Teaching Hospital, Ilorin, Kwara State, Nigeria).

This paper reports the sociodemographic characteristics of acceptors and their experience with the IUD at the University of Ilorin Teaching Hospital family planning clinic between January 1 and December 31, 1992. A total of 1,483 new contraceptive acceptors were seen at the family planning clinic during the period of study, of which 822 were first segment IUCD acceptors (55.4 percent). The results (net cumulative rates) were expressed as percentages during the period of study. The rates were as follows: accidental pregnancy (1.3 percent), expulsion (5.1 percent), and continuation (61.4 percent). The events leading to termination of IUCD use include medical reasons (6.8 percent), planning pregnancy (5.2 percent), and unspecified reasons (5.2 percent). It is concluded that IUCD is a safe and effective contraceptive with a high acceptability. The acceptability of IUCD can be increased by health education, good clinical management, sympathetic counseling, careful client selection, careful insertion, and regular follow up with quick access to medical care.

Olukoya, A.A. "Family Planning Services and Contraception in Shomolu, Lagos, Nigeria." *British Journal of Family Planning*, 13(1):17–22, April 1987.

A survey of contraceptive use in an area with a primary care project showed some increase in the use of contraception. However, persistent problems remained, related to the community attitude toward family planning and the use of more accessible services. Strategies for the integration of alternative services are discussed. Over the last decade, efforts have been made to improve the family planning services to women, partly as a result of the increasing awareness of the importance of child spacing for the health of mothers and children. Many developing countries have been involved in this effort, but African countries have tended to lag behind. In Africa, fertility levels remain high, and in Nigeria the Nigerian Fertility Survey (NFS) found the total fertility rate for all women to be 6.34, and it is believed to be rising. This is a high figure compared with some developed countries that have witnessed declining fertility. Rising fertility in Nigeria can be attributed to declining sterility, a shorter length of breastfeeding, and less postpartum abstinence, while the use of contraception remains low. The NFS found only 6.2 percent of exposed women currently using any form of contraception, and the biggest contributor to this was abstinence. Efforts at improving the delivery of family planning services need to be intensified.

Omu, A.E. and J.A. Unuigbo. "Acceptance of Contraceptive Practice by Grandmultiparae in Benin City, Nigeria." *International Journal of Gynaecology and Obstetrics*, 24(2):145–50, April 1986.

Five hundred and sixty grandmultiparous women were interviewed as to their contraceptive awareness, desirability, and use in the three major hospitals in Benin City, Nigeria, between October 1, 1980, and September 1981. Their parity ranged from 5 to 14 with a mean of 6.7. There was a high level of awareness of contraceptive availability and usefulness (65 percent), but a low level of practice (27.1 percent). The main causes of the low practice level included opposition from husband and other relatives, complications of previous methods used, and the desire to have a large family. Oral contraceptives were the preferred method, followed by IUDs. Educational attainment had a positive relationship with acceptance of contraceptive practice. It is believed that with more concerted effort at family planning counseling, the community will be rid of the hazards and menace of grandmultiparity.

Oni, G.A. and J. McCarthy. "Contraceptive Knowledge and Practices in Ilorin, Nigeria: 1983–88. *Studies in Family Planning*, 21(2):104–9, March–April 1990 (Department of Epidemiology and Community Health, University of Ilorin, Nigeria).

This report describes changes in knowledge and use of contraceptives in Ilorin, Nigeria, between 1983 and 1988, a period marked both by dramatic changes in Nigeria's economic climate as a result of the decline in the value of oil exports as well as by considerable increases in public programs aimed at promoting the use of family planning and reducing fertility. The report is based on the analysis of two surveys of married women aged 15–35 years who lived in the city of Ilorin. By 1988, knowledge of modern methods of contraception had become virtually universal in Ilorin, even among women with no education and among those living in the poorest areas of the city. Current use of contraceptives had also increased considerably since 1983, reaching prevalences of 15 percent among women with primary education, 20 percent among those with secondary education, and 40 percent among those with postsecondary education. Each of these groups of women experienced at least a doubling of contraceptive prevalence between 1983 and 1988. Although use among uneducated women was still low in absolute terms (prevalence of 4.5 percent), these women also experienced a substantial relative increase in use.

Oyeka, I.C. "Influence of the Number of Living Sons on Contraceptive Use Among Female Teachers in Nigeria." *Studies in Family Planning*, 20(3):170–4, May–June 1989 (Department of Applied Statistics and Demography, Anambra State University of Technology, Enugu, Nigeria).

This study examines the relationship between the number of living sons and contraceptive use among married female teachers in primary and secondary schools of the Enugu urban area, Anambra State, Nigeria. Within each category of number of living children, women with no living sons were least likely to have ever used modern contraceptives. Contraceptive use increased directly with the number of living sons. However, women with only sons and no daughters were less likely to have ever used modern contraceptives than were women with at least one son and one daughter. Better educated women who were close to achieving their desired family size, or whose desired family sex ratio was relatively low, were more likely to be contraceptive users.

Ozumba, B.C. and F.N. Amaechi. "Awareness and Practice of Contraception Among Female Students at the Institute of Management and Technology (IMT), Enugu." *Public Health*, 106(6):457–63, November 1992 (Department of Obstetrics and Gynaecology, University of Nigeria Teaching Hospital, Enugu.)

A study of the knowledge, attitudes, and practice of contraception among the female students at the Institute of Management and Technology (IMT), Enugu, was carried out, involving 266 female students out of a total female student population of 1,510. The mean age of the population sample was 19.1 years and 254 were single (95 percent). Ninety-six percent were aware of the availability of contraceptives. Knowledge relating to the practice of contraception was superficial since as many as 61 percent of the objectors believed that contraception subsequently led to infertility. One hundred and thirty (49 percent) of the studied population had used one form of contraception or another sometime in their lives. Seventy-six percent had not used any contraception for initial intercourse. The rhythm method followed by the barrier method were the most popular forms of contraception. Practice of contraception by the studied population was inconsistent as 21 percent of the students eventually had an unwanted pregnancy and 18 percent had an induced abortion.

Health education is strongly recommended to women in order to reduce the high incidence of unwanted pregnancy and its associated medical and social complications.

Ozumba, B.C. and P.C. Ibekwe. "Contraceptive Use at the Family Planning Clinic of the University of Nigeria Teaching Hospital, Enugu, Nigeria." *Public Health*, 115(1):51–3, January 2001 (Department of Obstetrics and Gynaecology, University of Nigeria Teaching Hospital, Enugu, Nigeria).

During the five-year review period (January 1993–December 1997), 19,470 clients visited the family planning clinic of the University of Nigeria Teaching Hospital, Enugu. Of these, 2,402 clients were new patients (12 percent) and 17,068 were existing patients (88 percent). Among the new clients, 2,262 eventually accepted a contraceptive method (94 percent). The majority of the women (60 percent) chose the IUD and 20 percent chose injectable contraceptives, while bilateral tubal ligation and Norplant were chosen by 8 percent and 7 percent of the clients, respectively. Oral contraceptives were the least popular (1 percent). Variations in the pattern of contraceptive use among clients at the family planning clinic were discussed. Measures to increase contraceptive prevalence, particularly strategies to meet the specific contraceptive needs of clients at the clinic, were also examined.

PP News. "Africa: Support for Family Planning Grows." *Planned Parenthood News*, 1(1):5, January–February, 1978.

African countries, generally regarded as among the world's most cautious on family planning matters, may be the most dramatic growth area for family planning projects over the next few years, according to the Kenya-based regional director for Family Planning International Assistance (FPIA), PPFA's own worldwide aid program. In a recent status report to FPIA's New York headquarters, a United States citizen and former Peace Corps volunteer who recently left FPIA to join the staff of the new House Committee on Population, forecasts a near tripling of FPIA-funded projects in 1978, from 7 to 19. Most of the potential new projects—in Nigeria, Togo, Liberia, Tanzania, and Sierra Leone—will involve the addition of family planning services to existing maternal and child health delivery systems, with emphasis upon the training of physicians and other medical, counseling, and educational personnel. Other prospective projects include family life education for adolescents in Cameroon and Ghana and a full-scale rural, mobile services delivery program in Tunisia. Behind these promising prospects is an apparent quiet but deliberate move by several governments—including Sierra Leone, Togo, and Cameroon—toward accepting family planning as an integral component of maternal and child health services. The moves in Cameroon and Togo are especially significant since both are French speaking and traditionally "pro-natalist and somewhat hostile to family planning." The pattern of change in these and other countries tends to be somewhat slow and low keyed. He notes that most governments "prefer not to have explicit official policies and programs, but rather to allow the gradual evolution of private services becoming an integral part of government-administered health and medical facilities." And even in some countries where government policies remain highly restrictive—the Ivory Coast, for example, where laws prohibit family planning except when necessary on medical and health grounds—many druggists stock a variety of contraceptives, all available to individuals and couples upon request. FPIA's current program in Africa, as in other regions, has two principal components: distribution of family planning commodities and supplies (more than \$500,000 worth of commodities have been distributed in African countries over the past 3 years) and financial and technical support of service and educational projects. Of the current projects,

there are two in Egypt and Kenya, two in Ethiopia, and one in the Sudan. In one of the most advanced of these—a project in Kenya designed to introduce family life education into the nation's primary and secondary schools—project leaders recently completed and presented to the Ministry of Education a comprehensive package of syllabi, curriculum texts, and teaching guides.

Renne, E.P. "Local and Institutional Interpretations of IUDs in Southwestern Nigeria." *Social Science and Medicine*, 44(8):1141–8, April 1997.

Ideas about fertility and the appropriate manner of its control are reflected in interpretations of Western contraceptives. This paper examines views of one contraceptive, the IUD, variously regarded by government health workers and family planning personnel and by Ekiti Yoruba women residing in one village in southwestern Nigeria. Their ideas about the IUD reflect particular views of the body, infertility, and human agency, with their attendant moral connotations. These views are evidenced in debates among family planning practitioners about how the IUD works and in the ambivalent regard of some village women for whom its use connotes infertility. This local disinterest in the IUD also reflects a general distrust of government programs and intentions, which recent funding cutbacks in medical services have reinforced.

Sunmola, A.M. "Developing a Scale for Measuring the Barriers to Condom Use in Nigeria." *Bulletin of the World Health Organization*, 79(10):926–32, 2001.

The objective was to describe the development of a scale for measuring the barriers to condom use in Nigeria and to evaluate its content, feasibility, reliability, and validity. The scale consists of 22 items and is structured on three dimensions: condom sexual satisfaction, condom health hazard, and condom sexual interest. It was evaluated on a sample of 786 students attending the University of Ibadan, Nigeria. The scale appears to be easy to use and is acceptable and reliable. The scale appears suitable for obtaining estimates of personal experiences of sexual and reproductive condom use. Further, it may be employed for assessing factors that hinder condom use in sexual relationships and is useful for determining the predisposition of individuals to use condoms in future sexual encounters.

Tauna, B.T. and V.L. Hildebrand. "Reproductive Health Knowledge and Implications: A Study in Nigeria." *Early Child Development and Care*, 87:83–92, 1993.

Forty-five percent of Nigeria's population is under age 15. This study employed a questionnaire to learn the level of reproductive health knowledge of 416 male and female Nigerian students, ages 10 through 16. The chi-square statistical procedure was used. Demographic characteristics were related to reproductive health knowledge among preteenage and teenage youth. Statistically significant ($p = 0.05$) relationships were found between variables such as knowledge of reproduction, family planning, and AIDS, when each was compared separately with age, gender, living situation while at school, school club memberships, and so on. With respect to reproduction and related topics, older teenagers indicated more knowledge than preteenagers, girls more than boys, and those living in dormitories more than those living at home or in other housing while attending school. Television ranked first in terms of students' sources of information on reproduction, pregnancy, birth control, and AIDS. Newspapers ranked second, radio third, teachers fourth, and parents fifth. Perhaps the most striking data are the "I don't know" responses with respect to AIDS. Thirteen percent had not heard of AIDS, 27 percent did not know how AIDS is transmitted, 29 percent did not know the seriousness of AIDS, 37 percent did not know how to avoid AIDS, and 14 percent did not know that a mother with AIDS might

infect her baby. Recommendations are made for increasing health services and education concerning reproductive health for preteenage and teenage students.

Wright, E.A., M.M. Kapu, and I. Wada. "Use of Condoms as Contraceptive and Disease Preventive Measures Among Residents of Jos, Northern Nigeria." *Contraception*, 42(6):621–7, December 1990 (Department of Obstetrics and Gynaecology, University of Jos, Nigeria).

The effectiveness, acceptability, and protective aspects of condoms as both contraceptive and disease control measures were evaluated in 168 male residents of Jos in Nigeria. They were between 15 and 40 and were attending the family planning clinic of the Jos University Teaching Hospital. The results showed that the majority (87.5 percent) of patients were in the 21 to 30 years age group and that most of the clients had used condoms for one to five years. A good number of clients (40.5 percent) used condoms because they protect against venereal disease, while others believed they were safe and effective. The family planning clinic was the main source of knowledge of the condom among clients (42.9 percent), and the condom was rated as good or excellent by 137 clients (81.5 percent). The only side effect of condom usage that featured prominently among our clients was reduced sexual excitement. The results were compared with studies carried out elsewhere. It was concluded that the condom could be an acceptable and effective form of contraception in this population. However, for optimal efficacy users need to be highly motivated to ensure use during every act of coitus.

Van Rossem, R., D. Meekers, and Z. Zkinyemi. "Consistent Condom Use with Different Types of Partners: Evidence from Two Nigerian Surveys." *AIDS Education and Prevention*, 13(3):252–67, June 2001.

HIV prevalence in Nigeria is increasing rapidly. Increased condom use is the most viable solution to slow down or reverse this trend. This article uses data from two waves of a nationwide survey, each with over 5,000 respondents, to examine factors that influence consistency of condom use with various types of partners. The results show that while the overall level of consistent condom use has remained low, reported consistent condom use with occasional partners and sex workers exceeds 60 percent. There is also some evidence of an increasing trend in consistent condom use, even after controlling for differences in sample composition and other factors. The most important factors affecting the consistency of condom use are awareness that condoms are effective at preventing both HIV and unwanted pregnancy, concern about unwanted pregnancy, and concern about HIV. Although concern about unwanted pregnancy has a strong effect on consistency of condom use with stable partners, concern about HIV infection has a strong effect on consistency of condom use with nonstable partners. The results suggest that HIV prevention programs need to do more than provide education about the modes of transmission and the ways to prevent infection. Improving the effectiveness of HIV prevention programs is likely to require focusing more explicitly on people's personal risk perception and condom efficacy. Focusing on these topics may further accelerate the observed positive trend in condom use.

Birth Interval, Birth Spacing, and Lactational Amenorrhoea Method (LAM)

Adewuyi, A.A. "Breastfeeding, Birth Interval and Polygyny in Nigeria." *Social Science and Medicine*, 24(7):573–80, 1987.

Polygyny has routinely been claimed to facilitate rules and taboos relating to postpartum sexual abstinence. However, in Nigeria, polygyny cannot wholly explain the

length of postpartum taboo following childbirth on the grounds that competition among cowives to exceed one another in childbearing results in a tendency of higher fertility and hence shorter postpartum taboo more often in polygynous households than that in monogamous families. Economic factors have been adduced as reasons explaining the recent tendency for mothers in polygynous families to have longer postpartum abstinence than their counterparts in monogamous households. Specifically, for young mothers aged 15–34, bearing children in quick succession is no longer attractive as in essentially traditional cultures where the husband's commitment to caring for children is taken for granted. Hence, the tendency for women in polygynous households to adhere more strictly to rules and taboos relating to postpartum abstinence could be associated to the changing roles of women, as they affect their responsibility with respect to the maintenance and training of their children rather than to the institution of polygyny per se.

Anonymous. "Lactational Amenorrhoea and Infant Feeding Patterns." *Progress in Reproductive Health Research*, 2000(55):4–5, 2000.

This study shows differences of daytime and nighttime infant feeding patterns and lactational amenorrhea in Australia, Sweden, China, India, Chile, Guatemala, and Nigeria. The mean number of episodes and the mean total daily duration fell according to the length of time after birth in all centers except China. In all centers, however, the frequency of breastfeeding declined with time after birth, but patterns of supplementary feeding differed markedly between the centers. Moreover, full breastfeeding declined over time in all centers, occurring in different patterns. The end of amenorrhea was recorded according to onset of vaginal bleeding lasting at least 2 days and requiring sanitary protection for at least 1 day, a menstrual bleed confirmed as first menses, and the woman's perception of a first menses. The study showed significant differences in the length of lactational amenorrhea. In China, breastfeeding women experienced a median of about 9 months of amenorrhea compared with 3–4 months in India. Feeding patterns also differed, with women in Australia, China, and Sweden delaying regular supplementary feeding until at least 3 months after birth, and women in Chile, Guatemala, and Nigeria starting supplements when the infant was about 1 week old.

Ayangade, S.O. "Birth Interval Study in a Culturally Stable Urban Population." *International Journal of Gynaecology and Obstetrics*, 15(6):497–500, 1978.

Five hundred women were interviewed within 2 days of delivery to examine indigenous birth spacing among the urban and rural population of Ife township. The crude birth interval was between 30 and 40 months, due mainly to cultural attitudes towards lactation and sexual abstinence. The women studied possessed considerable knowledge of Western contraceptive methods, but they rejected them. The possible cause of this rejection is examined and solutions to the problem are suggested.

Ebigbo, P.O. and W.O. Chukudebelu. "Child Spacing and Child Mortality Among Nigerian Igbo." *International Journal of Gynaecology and Obstetrics*, 18(5):372–4, 1980.

Until recently, a birth interval of at least two years was the norm in the Nigerian Igbo culture, a practice necessary for infant health and survival. A study of antenatal patients of the University of Nigeria Teaching Hospital, Enugu, Nigeria, shows that this cultural pattern has been disrupted by Westernization, urbanization and consumerism. The patients studied had an average of four pregnancies in five years. About half of those conceived did not survive, with 41 percent of the patients reported having lost at least one child. Modern family planning methods are urged as replacements for the abandoned traditional methods of child spacing.

Feyisetan, B.J. "Postpartum Sexual Abstinence, Breastfeeding, and Child Spacing Among Yoruba Women in Urban Nigeria." *Social Biology*, 37(1-2):110-27, Spring-Summer 1990 (Office of Population Research, Princeton University, New Jersey).

This paper examines the extent to which the traditional practice of sexual abstinence during lactation has broken down among Yoruba women residents in urban areas. The first major finding is that there is a gradual erosion of the tradition, and the dominant factors of modernization are education of the woman and the use of contraception. The second major finding is that the breakdown of postpartum sexual taboos has statistically significant negative consequences on duration of lactation, although the negative impact of the woman's education is greater. The third major finding is that duration of breastfeeding reduces the birth interval significantly only when it is less than 15 months, and that both durations of breastfeeding and birth intervals have declined over time. The first two findings suggest further reductions in the proportion of women who abstain from sexual relations during lactation and in durations of breastfeeding as more women become more educated. Significant declines in birth intervals may follow soon afterwards.

Isenalumhe, A.E. and O. Oviawe. "The Changing Pattern of Postpartum Sexual Abstinence in a Nigerian Rural Community." *Social Science and Medicine*, 23(7):683-6, 1986.

With a structured interview schedule, this study surveyed the pattern of postpartum sexual abstinence in a Nigerian rural community, where facilities for active contraception were absent. It was found that the younger generation observed a significantly shorter abstinence period ($p < 0.01$). Without contraception, the resultant increased period of sexual contact among couples may considerably raise the fertility of the population. The need for family planning services is therefore indicated, preferably integrated into primary health care programs designed to reach rural communities.

Lawoyin, T.O. and A.B. Oyediran. "A Prospective Study on Some Factors Which Influence the Delivery of Low Birth Weight Babies in a Developing Country." *African Journal of Medicine and Medical Sciences*, 21(1):33-9, October 1992 (Department of Preventive and Social Medicine, University College Hospital, Ibadan, Nigeria).

The study was prospective in design and carried out in Ibadan, Nigeria. It was undertaken in order to provide more information on the low birth weight deliveries seen here and to evaluate some factors associated with their births. Six hundred randomly selected gravid women who presented to the antenatal booking clinics for the first time in this pregnancy were followed up until delivery of their babies. Data on 492 women who produced normal, singleton babies were analyzed. The mean birth weight was 3,167g \pm 451g (males 3,205g \pm 469g, significantly higher than of females of 2,991g \pm 468g). The incidence of low birth weight (LBW) of 2,500g and less was 8.3 percent, comprised of 18 males, 22 females, and 1 of unknown sex. Eighty percent of these LBW babies were term (37-41 weeks gestation) at delivery, while 20 percent were preterm (< 37 weeks). There was seasonal variation in the incidence of LBW, the risk being highest during the peak of dry season and lowest during the rainy season. The mother's age, parity, height, ponderal index at delivery, and total maternal weight gain as well as birth interval were each significantly related to the incidence of LBW in these mothers ($p < 0.01$). Maternal education as well as socioeconomic class were not significant ($p > 0.5$).

Olukoya, A.A. "Differences Between 'Spacers and Stoppers' Amongst Family Planning Acceptors in Lagos." *Public Health*, 105(6):463-6, November 1991 (Institute of Child Health and Primary Care, College of Medicine, Lagos, Nigeria).

The study presented was carried out on 3,386 new family planning acceptors at a primary health care clinic over an 11-year period. Women accepting modern family planning for stopping childbearing accounted for only 2.7 percent of the sample. They were older, less educated, and had higher mean gravidity, parity, and number of children alive. They were also more likely to choose the IUD over the pill. Service and policy implications of the findings are discussed.

Oni, G.A. "Breastfeeding: Its Relationship With Postpartum Amenorrhea and Postpartum Sexual Abstinence in a Nigerian Community." *Social Science and Medicine*, 24(3):255–62, 1987.

Breastfeeding, together with its two related postpartum variables—amenorrhea and abstinence—govern both the tempo and quantum of fertility in traditional African societies. Decline in breastfeeding also implies decline in postpartum amenorrhea and abstinence practice. Changes in breastfeeding practices in tropical Africa, therefore, have fertility implications and consequences. This paper examines how breastfeeding is functionally related to postpartum amenorrhea and abstinence in Ilorin, an urban community in Nigeria. Results indicated that the effect of breastfeeding on fertility, through its relationship with postpartum abstinence, might be more important than its effect through lactational amenorrhea in this society. This is more true among women with little or no education than among women with secondary or higher education. The population or family planning implications of these relationships are discussed.

Oni, G.A. and J. McCarthy. "Use of Contraceptives for Birth Spacing in a Nigerian City." *Studies in Family Planning*, 17(4):165–71, July–August 1986.

This paper examines the use of contraceptives among women aged 15–35 in the urban area of Ilorin, Nigeria, with particular focus on use for the purpose of spacing births. Approximately 19 percent of ever-married women in the sample had used contraceptives at some time and approximately 6 percent were using at the time of the survey. Results suggest that some women have used or are using contraceptives as a substitute for prolonged periods of postpartum sexual abstinence. Whereas all groups of women in the study prefer to maintain an interval of two years between births, less traditional women no longer prefer to observe long periods of postpartum sexual abstinence. For some women, therefore, there is a wide gap between the length of preferred birth interval and the length of preferred abstinence. The magnitude of this gap is significantly associated with both ever use and current use of contraceptives. Other variables found to have a significant independent effect on contraceptive use were total number of children desired, maternal age, and maternal education.

World Health Organization Task Force on Methods for the Natural Regulation of Fertility. "The World Health Organization Multinational Study of Breastfeeding and Lactational Amenorrhea I; Description of Infant Feeding Patterns and of the Return of Menses." *Fertility and Sterility*, 70(3):448–60, September 1998.

Objective: To detect differences between populations in both infant feeding practices and the duration of lactational amenorrhea, if they exist. **Design:** Prospective, nonexperimental, longitudinal follow-up study. **Setting:** Five developing and two developed countries. **Patient(s):** 4,118 breastfeeding mothers and their infants. **Intervention(s):** Breastfeeding women collected ongoing information about infant feeding and family planning practices, plus the return of menses. Fortnightly follow-up occurred in the women's homes. **Main outcome measure(s):** Breastfeeding frequency by day (and by night); 24-hour breastfeeding duration, percent of all infant feedings that were milk/milk-based (and

solid/semisolid foods); time until the end of full breastfeeding; time until regular supplementation; and time until the end of lactational amenorrhea. **Result(s):** Differences between the centers in the duration of amenorrhea were substantial, ranging from a median of 4 months in New Delhi (India) to 9 months in Chengdu (China). Women in developed countries (but also women in Chengdu) were more likely to delay supplementation (for up to 5 months), whereas women in Santiago (Chile), Guatemala City (Guatemala), and Sagamu (Nigeria) started supplements much earlier, sometimes as early as 1 week after birth. **Conclusion(s):** Both breastfeeding behavior and the duration of lactational amenorrhea vary markedly across settings, indicating that breastfeeding promotion and family planning advice should be site and culture-specific.

Contraceptive Providers

Asuzu, M.C., B.A. Omotara, and M.K.O. Padonu. "The Epidemiology and Management of Sexually Transmitted Diseases in Maiduguri Metropolis." *Nigerian Medical Practitioner*, 23(4): 57–61, 1992.

Some pharmacists establish their private pharmacies and practice as full-fledged doctors, performing clinical medical consultations, taking medical histories, diagnosing illnesses, prescribing and treating illnesses, and even ordering laboratory investigations.

Bamgboye, E.A. and O.A. Ladipo. "Oral Contraceptive Marketing in Ibadan, Nigeria." *Social Science and Medicine*, 35(7): 903–6, 1992.

In the year 1988, 163 pharmacies in Ibadan, Oyo State in Nigeria were surveyed to learn the types of contraceptives available, emphasizing oral contraceptives, the number of pharmacies carrying them, the volume of sales, and costs of the various contraceptives. Seventy-eight percent carried at least one oral contraceptive brand, 19.1 percent did not have records of any contraceptives, and 3 percent did not carry any contraceptives. The total pill cycles sold were 4,443 in November 1987 and 3,898 in December 1987. Sterling manufactured oral contraceptives (Norriday and Femenol) made up most sales in November and December (44.1 percent and 47.3 percent, respectively) and were the cheapest priced (Naira (N) 1/cycle and N1.50/cycle, respectively). Of pharmacies, 54.3 percent stocked Norriday; only 23.65 stocked Femenol. Twenty-one percent carried Eugynon, which was also the most expensive oral contraceptive (N10/cycle). The cost per couple years of protection based on 13 cycles ranged from US \$2.60 to US \$39, according to the exchange rate at the time of the study. Thirty-nine percent stocked the condom Sultan, which was the market leader. Even though Sterling manufactured only 35.7 percent of the available condom brands, Sterling brands constituted 68.6 percent and 62.2 percent of total condoms sold in November and December, respectively. Sterling brands also were the least expensive condoms. All pharmacies that marketed contraceptives (127) also stocked vaginal foam tablets. Of all tablets sold in November and December, 91.8 percent and 90 percent, respectively, were Neosampoon, but it was the most expensive tablet. Thirty-six percent of all pharmacies carried the injectable contraceptive Depo-Provera. The price of injectable contraceptives was higher than other contraceptives. Pharmacies that sold contraceptives tended to be located in the southwestern, northwestern, and northeastern zones of Ibadan. Almost all the pharmacies claimed that lower prices for oral contraceptives, availability, and accessibility would increase their contraceptive sales. It is suggested that the government subsidize oral contraceptive prices and allow patent medicine stores and other nonmedical channels to distribute contraceptives to free society of its excessive fertility.

Ibrahim, H. "Making PPFN Result-Oriented." *PLANFED News*, 6(2):3, January 2001.

The Planned Parenthood Federation of Nigeria (PPFN) is Nigeria's foremost and largest volunteer-based NGO. As a full member of the International Planned Parenthood Federation, PPFN is committed to the provision of quality and accessible sexual and reproductive health services, including family planning to couples, individuals, and young people through active community participation and transparent management. However, to become a result-oriented organization, effective governance that looks at the sustainability of programs is needed. Hence, in November 1999, PPFN took some concrete steps towards governance, staffing, and program restructuring for greater efficiency and effectiveness along the lines of a true federation, with decentralization of responsibilities.

Kiragu, K., S. Chapman, and G. Lewis. "The Nigeria Family Planning Facility Census: Implications for Social Marketing." Presentation at the second annual conference on social marketing, "Advancing Empirical Work in Social Marketing," Fairfax, Virginia. May 15–17, 1996 (See also *The Nigeria Family Planning Facility Census*. Baltimore, MD: The Johns Hopkins Center for Communication Programs, 1995).

In Nigeria the Family Planning Facility Census was conducted to allow the Family Health Services project to know how many family planning facilities existed in Nigeria and where they were located. With that information, the project aimed to produce the appropriate amount of campaign materials and distribute them to each facility. From March to August 1992, about 3,000 former census workers distributed the family planning logo and information, education, and communication (IEC) materials to sites in Nigeria that could be reasonably expected to provide family planning services (hospitals, health centers, clinics, maternity homes, pharmacies, chemists/patent-medicine shops). They interviewed private and public sector health practitioners and operators of various distribution outlets (e.g., pharmacists). The census yielded an inventory of names, locations, and types of family planning facilities, the contraceptive methods provided, and whether they have supply problems. An inventory is available for each state and LGA. The census data can be used to understand the service delivery system (number of family planning facilities, types of facilities, types of methods, supply problems, unused facilities, and IEC materials), to expand access and avoid missed opportunities (distribution of IEC materials, use of the data at the national and local levels and monitoring problem areas), and to identify opportunities for research (service delivery evaluation, sampling frame, and methodology). The census identified 33,366 out of 41,243 sites visited that provide family planning services and/or supplies. Fifty-six percent of these providers are chemists/patent-medicine shops; 11 percent are clinics. Eighty-one percent of the facilities were privately owned. Eighty-six percent of the outlets provided condoms; 72 percent provided oral contraceptives. About 36 percent of the outlets, especially clinics, health centers, and maternity centers and hospitals, faced supply problems. Two hundred and fifty-six hospitals, 440 health centers, almost 700 clinics, and about 400 maternity centers did not provide family planning services. About 42 percent of family planning outlets provided IEC counseling and information. (A full report by Family Health Services is available on POPLINE).

Olowu, F. "Why Not Use Nigeria's Agricultural Extension System to Increase Access to Family Planning?" *International Family Planning Perspectives*, 23(3): 134–136, 1997.

The UNFPA and the International Fund for Agricultural Development mission to the riverine areas of Nigeria support a health–agriculture linkage. Family planning activities could easily be combined with the development of small-scale fisheries, farming, and social development activities. Nigeria's focus is on slowing its population growth rate, reducing its current high rates of maternal and infant mortality, and improving the health and quality of life of its population, particularly women and children. The provision of comprehensive

family planning services is a major strategy for achieving the aims of the national population policy. Using agricultural extension agents would help expand reproductive care choices and would represent an innovative intersectoral strategy for Nigeria. A pilot project to determine the most cost-effective method of using different combinations of agricultural extension agents to promote the use of family planning services is most justifiable and overdue. This would require recruitment of more female extension agents and efforts to provide extension services to more women. Ultimately, a family planning curriculum could be introduced into extension agent training.

Quality of Family Planning Services

Askew, I., B. Mensch, and A. Adewuyi. "Indicators for Measuring the Quality of Family Planning Services in Nigeria." *Studies in Family Planning*, 25(5):268–83, September–October 1994 (Programs Division, Population Council, Nairobi).

This article presents the situation analysis approach as a means of collecting data that can be used to assess the quality of care provided by family planning service delivery points (SDPs) and describes the quality of services offered in Nigeria. Elements of the quality of services provided at 181 clinical SDPs in six states of Nigeria are described. The substantive results from the study suggest that although most of the 181 SDPs sampled are functional, the quality of care being provided could be improved. Illustrative scores for these indicators and elements of the Bruce-Jain framework are given. By comparison with contraceptive prevalence surveys, the situation analysis approach is still in its early stages. Some methodological issues are raised, and future directions for strengthening the validity and applicability of the approach are discussed.

Kim, Y.M., J. Rimon, K. Winnard, C. Corso, I.V. Mako, S. Lawal, S. Babalola, and D. Huntington. "Improving the Quality of Service Delivery in Nigeria." *Studies in Family Planning*, 23(2):118–27, March–April 1992 (Baltimore, MD: Population Communication Services, School of Hygiene and Public Health, Johns Hopkins University).

This study evaluates the effect of a nurse training program in family planning counseling skills on the quality of service delivery at the clinic level, as well as its impact on client compliance with prearranged appointments. The study used a quasi-experimental design to compare certified nurses who received 6 weeks of family planning technical training with certified nurses who, in addition to the technical training course, received a 3-day course in counseling skills. Data were collected through client exit interviews, expert observation, and inspection of medical record abstracts. Trained nurses performed better than their untrained counterparts in the quality-of-care areas investigated—interpersonal relations, information giving, counseling, and mechanisms for encouraging continuity. The likelihood that clients will attend follow-up visits was also found to improve when they were attended by trained professionals. Training in short-term counseling can significantly improve the quality of care provided by family planning workers, as well as client compliance with follow-up appointments.

Mensch, B., A. Fisher, I. Askew, and A. Ajayi. "Using Situation Analysis Data to Assess the Functioning of Family Planning Clinics in Nigeria, Tanzania, and Zimbabwe." *Studies in Family Planning*, 25(1):18–31, January–February, 1994 (New York: Population Council).

Situation analyses conducted in Nigeria, Tanzania, and Zimbabwe have revealed problems in the functioning of many of the subsystems of family planning service delivery—namely in supplies of commodities; facilities and equipment; staffing and training; information, education, and communication; and recordkeeping. Although a clear pattern of

clinic use exists in that only a few SDPs provide contraceptive services to the majority of new family planning acceptors in the three countries, an attempt to explain how clinics with more clients differ from those that are visited less frequently revealed only a weak association between subsystem functioning and use.

Olowu, F. "Quality and Costs of Family Planning as Elicited by an Adolescent Mystery Client Trial in Nigeria." *Africa Journal of Reproductive Health*, 2(1):49–60, April 1998 (Department of Primary Health Care, Ministry of Health, Plateau State, Jos, Nigeria).

Results are presented from a rural reproductive health project in Delta State, Nigeria. A baseline survey of family planning clients revealed that only 2 percent of adolescents were utilizing the services. Therefore, four adolescents, two males and two females posing as two couples, were used as mystery clients to assess providers' response to adolescents as well as the adolescent perspectives on the quality and costs of the family planning services in the clinics they visited. This was complemented with a participatory rural appraisal of the communities. The adolescent mystery clients reported that some providers were surprised to see them, were judgmental, and engaged them in religious counseling. The adolescents found the services unsatisfactory but the costs were affordable. In the participatory rural appraisal, the communities found the cost of contraceptives affordable despite a recent price increase of 20–150 percent across the different contraceptives. Emerging practices that were detrimental to adolescent reproductive health were also discovered, and innovative approaches for promoting access to reproductive health information for out-of-school adolescents through the use of artisan trade associations and home videos are suggested.

Oyediran, M.A. "The Importance of Training and Supervision in Quality of Care." *Advances in Contraception*, 9(2):175–8, June 1993 (Department of Community Health, College of Medicine, University of Lagos, Nigeria).

Training of family planning service providers requires the identification and selection of service providers, knowledge of their functions in the overall health team, provision of job descriptions and assessment of training needs. These can assist in the definition of training objectives and the establishment of program content. Varied teaching methodologies and aids can enrich the program and maximize learning and the venue and facilities provided for training should be accessible, appropriate in setting (using primary, secondary, or tertiary facilities as necessary), and should provide an adequate standard of care. Evaluations of training performance should be regular and ongoing, with final assessment leading to recognition of training. The program should be evaluated by trainers and trainees to assist in improving the quality of the training and the competence of the trainers. Finally, supervision and monitoring of performance in the workplace can be achieved by direct internal or external supervision, by indirect supervision using standing orders or guidelines, and by evaluations conducted by managers, service providers, and clients.

Turner, R. "Situation Analyses Reveal Great Variations in Quality of Services Provided at African Family Planning Sites." *International Family Planning Perspectives*, 20(3):115–16, 1994.

Situation analyses of family planning clinics in Nigeria, Tanzania, and Zimbabwe in 1991–92 are discussed. There was much room for improvement in all three countries. In Nigeria, six teams visited 181 of an estimated 1,400 family planning SDPs. This summary focuses on the Nigerian findings. Hospitals were oversampled as they were believed to be the primary source of family planning services. Fewer than half the clinics had disposable gloves, and slightly more than half had adequate water. Nigerian clinics offered a greater choice of methods: 4.9 compared with 3.2 per SDP in the other countries. More than three

fourths of the Nigerian sites provided IUDs, injectable contraceptives, and spermicides. Only 18 percent had supplies of progestin-only pills. Forty-one percent of SDPs had sterilizing lotion. More than one third of the clinics did not open on schedule. Only 6 percent of staff had no training in family planning. Sixty-nine percent of clinics had adequate supervision. In only 52 percent of sites was there a sign visible to maternal and child health clients indicating the availability of family planning services. Printed materials were lacking. Most service sites had few new clients: 79 percent of new clients were served by 25 percent of the clinics, and 6 percent had no new clients in the preceding year. Clients appeared to rank quality of services as a major reason for choice of clinic, as 39 percent of the 351 clients reported that the clinic where they were interviewed was not the closest to their home. Their clinic of choice was said to offer a wider range of services.

USAID. "Assessing the Performance of Family Planning Service at the Primary Care Level in Nigerian LGA Health Centers and NGO Clinics: Final Report." January 2001 (Performance Needs Assessment Team).

During the years 1992–98, the years of military dictatorship, the health sector in Nigeria experienced neglect. This neglect shows in the decline in overall health statistics in the country. Likewise, family planning services have seen a decline, with the anticipated decline in family planning statistics, such as fertility rate and maternal mortality. During the period since the return of democracy, USAID has played an instrumental role in strengthening the general health sector. With the effects of HIV/AIDS strongly felt in Nigeria, USAID rightly established priorities for early efforts in the HIV/AIDS sector. With those efforts showing promise and progress, USAID is now planning to reemphasize its commitment to family planning and reproductive health (FP/RH) in Nigeria. In early 2001, USAID Nigeria will formulate and disseminate its plan to strengthen FP/RH in the near and mid-term. In order to make an effective plan, USAID/Nigeria, in concert with USAID/Washington, is gathering information about the current status of FP/RH in Nigeria as well as the needs of the FP/RH service provider network. The Nigeria performance needs assessment team described in this report will provide one input, one source of information to be used by USAID to improve decision-making. In December 2000, a six-member team made up of staff from five USAID cooperating agencies (CAs) visited Nigeria to answer three questions about the state of FP/RH services: 1) What is the desired performance of clinics and providers? 2) Compared to that standard, what is the actual performance of clinics and providers? 3) Where there are gaps between desired and actual performance, what are the causes; what do clinics and providers need to perform better? The team's focus was the primary service delivery site, both public and NGO. Partnering with federal and state Ministry of Health staff members, teams visited the three representative states of Oyo, Enugu, and Bauchi. There they conducted stakeholder meetings and focus group discussions and made site observation visits to answer the three questions. (The methodology is based on the USAID performance improvement consultative group's performance improvement approach.) The team found that there are significant gaps between client and community-desired performance of clinics and providers and actual performance. Clinics have high-priority performance gaps in the areas of service availability, commodity availability, management systems, and clinic cleanliness. Providers have high-priority performance gaps especially in the areas of interpersonal skills, FP counseling procedures, infection prevention procedures, and recordkeeping. Next steps will include return site visits by USAID staff to finalize plans for interventions to close these important performance gaps. Interventions will be deployed during the latter half of 2001.

III. REPRODUCTIVE RIGHTS

Policy and Law

Adekunle, A.O. and E.O. Otolorin. "Evaluation of the Nigerian Population Policy—Myth or Reality?" *African Journal of Medicine and Medical Sciences*, 29(3–4):305–10, September–December 2000 (Department of Obstetrics and Gynaecology, University College Hospital, Ibadan, Nigeria).

The National Population Policy (NPP) was promulgated to improve the living standards and quality of life of Nigerians by reducing the persistently high level of fertility and population growth and achieving an even rural–urban development. The aim of this study was to review Nigeria's demographic patterns in the last decade against the 1995 and 2000 benchmarks stipulated in the NPP. The results revealed that the total fertility rate fell significantly to 6.2 in the earlier half of the decade, but is still far from the targeted figure of 4.0. The infant mortality rate had risen in the past five years, and although the crude death rate declined by 21.49 percent in 1995, it has remained stagnant since then. There has been no appreciable decline in the rate of natural increase, which was expected to fall by 31.03 percent in 2000. The current contraceptive prevalence of 11.0 percent is far below the targeted 80 percent set in the population policy. In general, the situation that influenced the decision to promulgate the NPP in 1988 has not improved much: the national decline in fertility is not appreciable and the increase in welfare is not significant. The key issues in the reproductive health sectors include the limited availability and poor quality of services, which lead to high maternal and infant mortality rates, inadequate adolescent outreach, and limited use of contraceptives. This evaluation of the policy's targets and objectives in the light of the 1995 and 2000 benchmarks reveals that the NPP has failed due to an underestimation of the huge financial resources required for implementation, lack of political will, poor and uncoordinated organization, gender inequality, and the prolonged political instability in the country.

Akande, J. "Gender Equality and the 1999 Constitution—a Missed Opportunity." *Gender Views*, 4(1):7–8, January–April 2000.

Although the administration of General Abdulsalami Abubakar had constituted a constitutional debate collating committee to synthesize the views of the people on the Constitution to be promulgated, none of the recommendations were reflected in the promulgated 1999 Constitution. To this effect, Nigerian women, led by two women who have themselves been in the vanguard of women empowerment, organized a conference on January 13, 2000, in Abuja to prepare the women's memorandum on Gender Review of the 1999 Constitution. As prelude to the conference, a small technical committee composed of 10 women was constituted to highlight the areas that are critical to the enhancement and protection of the interest of women. All the issues identified by this committee were considered and analyzed by the more than 300 women and youths who attended the conference. Overall, the women believe that the 1999 Constitution is a missed opportunity as far as gender equality and women rights are concerned. Consequently, it fails to lay down the foundation upon which a truly democratic society can emerge.

Avong, H.N. "Perception of and Attitudes Toward the Nigerian Federal Population Policy, Family Planning Program and Family Planning in Kaduna State, Nigeria." *African Journal of Reproductive Health*, 4(1):66–76, April 2000 (Navrongo Health Research Centre, Upper East Region, Ghana).

This paper discusses the perceptions of the Nigerian population policy, family planning program, and family planning using data obtained from a 1995 survey of 600 Atyap women, aged 15–49 years, in Nigeria. Additional qualitative data were obtained from married and unmarried women and men, clergymen, government officials, and respected community elders. The predominantly Christian and rural Atyap community generally accepts modern contraception and the need for family size reduction but considers the “four is enough” policy to be unacceptable. Religion may be important in determining the success of the federal government efforts to reduce family size to four children by the year 2000.

Ebigbola, J.A. “A Dilemma in National Population Policy: Evidence from Nigeria.” *Janasamkhya*, 6(2):169–82, December 1988.

The population policies followed by the several governments of Nigeria since 1970 are discussed in relation to the national development plans. The respective governments have not shown the political will to formulate policies that could be enforced to reduce fertility, with the result that the population problem has become acute in the country. Even the little economic progress made has not resulted in the acceptance of contraception to a level that can produce an effective decline in fertility. Taking into account the peculiar cultural problems of Nigeria, suggestions are made to have a successful conception control program for Nigeria.

Ezielo, J.N. “Status of Sexual and Reproductive Health Rights of Adolescents in Nigeria.” Commissioned by the John D. and Catherine T. MacArthur Foundation, c. 2000.

The Criminal Code protects females under 13 years from sexual intercourse not withstanding any consent, but wives of the same age are excluded. Marriage thus provides a defense for sexual abuse (sections 218, 367). The offense of marital rape is unrecognized under Nigerian law. Both criminal and penal codes created several sexual offenses to protect children under 16 years (e.g., from defilement, rape, and indecent assault). The overall aims of these laws is to prevent sexual immorality, delay first sexual intercourse, and check risky sexual behaviors. Section 218 of the Criminal Code notes that “Any person who has unlawful carnal knowledge of a girl under the age 13 years is guilty of a felony and is liable to imprisonment for life, with or without caning.” A person who attempts this is liable for imprisonment for 14 years. Further, unlawfully and indecently dealing with a boy under 14 years is a felony attracting seven years in prison. Other crimes and penalties are spelled out concerning various age groups and mental conditions of the child. Section 222A explains that if a person has custody of a girl under 16 years and causes or encourages seduction, unlawful carnal knowledge or prostitution, he/she is liable for two years imprisonment. A householder permitting defilement of a girl 13–16 is subject to a misdemeanor, while if the child is under 13 years, it is a felony. The report outlines other legal and policy issues. The Social Development Policy of 1989 was designed to minimize teenage pregnancy, child marriage, and harmful cultural practices. Abortion is illegal under the criminal codes in southern states and penal codes in northern states. The Population Policy of 1988 aimed at reducing marriage and pregnancy for girls under 18 years. The National Adolescent Health Policy omitted reference to contraceptive needs. Nigeria had not ratified the African Charter on the Rights and Welfare of the Child, which encourages legislation to make 18 years the minimum marriageable age. Interestingly, the customary law of the eastern states requires that a girl be at least 16 years old to marry (Age of Marriage Law 1986, CAP6, Laws of Eastern Nigeria, Section 3(1)). Although no laws prohibit female circumcision, some legal practitioners have used statutes that address the offence of committing grievous bodily harm, unlawful wounding, and the right to dignity of person as a way of addressing the issue. A draft Children and Young Persons Law of 1999 actually labeled female genital

mutilation/female genital cutting as a criminal offense. The issue has been addressed directly in law in Edo and Cross River states.

Mcwest, C. "Empowering Women: Interventions. Nigeria: New Law to End FGM." *Africa Link*, 12, April 1995.

In March 1994, a Nigerian woman fighting to spare her young daughters from circumcision was saved from deportation from the United States by a judge who called the practice cruel, painful, and dangerous. Female circumcision or genital mutilation has been a custom in male-dominated African societies to prevent promiscuity among women, reduce their sex urge, and enhance their fertility and fecundity. The mutilation ranges from clitoridectomy (cuts in the clitoris) to infibulation (removal of the labia and sewing up most of the vagina). These practices that operated traditionally or in hospitals are condemned in most parts of the world. In 1993, the World Health Organization (WHO) vowed to fight female circumcision, which has claimed the lives of tens of thousands of women, and subjected and still subjects millions of others to suffering. In Nigeria, the military government is due to sign a new law that will end the practice. Indeed, parents who circumcise their daughters could face seven years imprisonment. This law is from legislation that is designed to improve health care for children in Nigeria.

Okagbue, I. "Pregnancy Termination and the Law in Nigeria." *Studies in Family Planning*, 21(4):197–208, July–August 1990 (Nigerian Institute of Advanced Legal Studies, University of Lagos campus).

Abortion in Nigeria is illegal and carries a heavy jail sentence—up to 14 years imprisonment—unless it is performed to save the life of the pregnant woman. Nevertheless, a large number of clandestine abortions continue to be carried out regularly, often with dire consequences for the lives and health of the women involved. This article reviews abortion legislation in Nigeria, examines court decisions on the subject, and presents the results of a survey conducted on the incidence of abortion in the country. A case is made for revising existing abortion laws. A brief look is taken at the various indications for abortion that might be adopted, and a proposal is made for a new abortion policy in Nigeria in light of the country's recently adopted population policy.

Opaneye, A.A. "Maternal Formal Education and the Four-Child Policy in Nigeria." *Journal of the Royal Society of Health*, 110(6):220–1, December 1990 (General Hospital, Birmingham, England).

A cross-sectional survey was done in the puerperium of 320 mothers who delivered at Ogun State University Teaching Hospital, Sagamu, Nigeria, over a period of 3 months. The patients were stratified according to their parities in relation to their levels of formal education. The results showed that those with the least formal education were the most parous ($p < 0.005$) and had the highest perinatal deaths. The difference between perinatal deaths suffered by mothers with no formal education and those with postsecondary school education was statistically significant ($p < 0.05$). No association was demonstrated between the level of formal education and the delivery of low birthweight infants. When compared with grandmultiparae ($p > \text{or} = 5$), primipara had more formal education ($p < 0.005$). Therefore, for a successful implementation of the four-child policy in Nigeria, a concerted effort must be made to encourage maternal formal education. This should be to at least secondary-school level.

Raufu, A. "Nigeria Recommends Jail Terms to Eradicate Female Genital Mutilation." *British Medical Journal*, 4:324(7345):1056, May 2002.

This news article reports that the Nigerian legislature is set to pass a law banning FGM and imposing a two-year jail term for offenders. Some activists have complained that the two-year imprisonment is not strict enough, especially because it allows for an option of a fine of \$100 or the imposition of both a fine and incarceration.

Renne, E.P. "Perceptions of Population Policy, Development, and Family Planning Programs in Northern Nigeria." *Studies in Family Planning*, 27(3):127–36, May–June 1996 (Woodrow Wilson School, Office of Population Research, Princeton University).

In this article, local perceptions of family planning programs and federal population policy are examined, based on responses to a childbirth survey and on interviews with a range of individuals in one northern Nigerian town. The respondents' differing perceptions of the relationship between population and national development reflect distinctive ideas about political authority, population policy, and family planning programs; development; and domestic and international political affairs. Local suspicions about the Nigerian population policy and family planning programs suggest that they cannot be implemented in isolation from broader political and economic concerns. This distrust has ramifications for current family planning programs and reproductive health initiatives undertaken by Western-sponsored aid projects.

Culture, Rights, and Coercion

Ajuwon, A.J., I. Akin-Jimoh, B.O. Olley, and O. Akintola. "Perceptions of Sexual Coercion: Learning from Young People in Ibadan, Nigeria." *Reproductive Health Matters*, 9(17):128–36, May 2001 (African Regional Health Education Center, Department of Health Promotion and Education, College of Medicine, University of Ibadan, Nigeria).

This study explored the problem of sexual coercion from the perspectives of 77 young people (aged 14–21 in Ibadan, Nigeria), the behaviors they perceive to be sexually coercive, and the contexts in which these occur, through four narrative workshops. Participants were drawn from two secondary schools and 15 apprentice workshops. All four groups identified similar coercive behaviors and developed narratives of the events that typically lead up to them. Behaviors included rape, unwanted touching, incest, assault, verbal abuse, threats, unwanted kissing, forced exposure to pornographic films, use of drugs for sedation and traditional charms for seduction, and insistence on abortion if unwanted pregnancy occurs. Men were typically the perpetrators and young women the victims. Perpetrators included acquaintances, boyfriends, neighbors, parents, and relatives. All the narratives revealed the inability of young people to communicate effectively with each other and to resolve differences. The results suggest the need for life-skills training that facilitates communication, seeks to redress gender power imbalances, teaches alternatives to coercion as a means of resolving conflict over sexual relations, teaches respect for sexual and reproductive rights, and provides victims with information on appropriate services, support, and referral.

Ajuwon, A.J., B.O. Olley, I. Akin-Jimoh, and O. Akintola. "*African Journal of Reproductive Health/Revue Africaine de la Santé Reproductive*." 5(3):120–31, December 2001.

Experience of sexual coercion among adolescents in Ibadan, Nigeria, was studied. This study surveyed 1,025 adolescent students and apprentices (young person learning a vocation in the informal economy) in Ibadan, Nigeria, to document both their sexual behaviors and their experiences of sexual coercion, including verbal threats, unwanted touch, unwanted kiss, assault, deception, drugging, attempted rape, and rape. Sixty-five percent of male and 48 percent of female apprentices were sexually experienced, compared with 32

percent of male and 24 percent of female students. More males than females reported sex with multiple partners and contact with a sex worker, while females had exchanged sex for money and gifts. Fifty-five percent of all the subjects had been victims of at least one type of sexual coercion, the most common being unwanted kissing and touch of breasts (47 percent). Although both males and females were victims of coercion, females were disproportionately affected—68 percent of female students and 70 percent of apprentices had experienced one coercive behavior, compared with 42 percent of male students and 40 percent of apprentices. Female apprentices fared worst, with 19 percent of them raped. The main perpetrators of the coercion were persons well known to the victims, including neighbors, peers, and boy/girlfriends. The authors recommend multiple intervention programs, including skills training for young persons, sensitization workshops for training health workers, and media advocacy for the public to challenge stereotypes that favor sexual coercion of adolescents.

Anonymous. "Safiya Freed, Amina Sentenced." Nigeria, *Women's Health Journal*, (1):18–9, January–March 2002.

This news article reports on the success of local and international human rights organizations in saving Safiya Hussaini from a death sentence given by a court in Nigeria. The international campaign for solidarity also resulted in Nigeria's President Olesgun Obasanjo declaration that Islamic Sharia law violates the Nigerian constitution's prohibition against religious and sexual discrimination. The article also mentions the ongoing work of activists to combat the serious human rights violation inherent in Sharia law to save Amina Lawal Kurami, charged with having a baby out of wedlock, and sentenced to death by stoning.

Anonymous. "Sexual Coercion Among Young Nigerians." *Progress in Reproductive Health Research*, (58):5, 2002.

A study conducted in Ibadan, Nigeria, explored the perceptions of sexual coercion among young females and males, aged 14–21 years, and the circumstances in which it was perceived, and the sequence of behaviors and motives associated with it. Data were obtained through four narrative workshops in which 77 young men and women participated. The participants were either students or apprentices randomly selected from local schools and shops. The four workshops identified similar coercive behaviors, which fell into the following three groups: 1) forced sex, such as rape, unwanted touching, incest, assault, and threats; 2) behaviors involving deception and setting the stage for nonconsensual sex; and 3) one partner's refusal to accept the other's choice in deciding on the outcome of sex. Overall, it was found that sexual coercion of young women was described as a carefully planned act committed in a familiar setting, usually by someone well known to the victim. Coercion was rarely depicted as an isolated event but rather as a series of behaviors, including deceit, use of drugs, verbal insistence and threats, and unwanted touching. The study findings suggest the need for building self-esteem among both young females and males, and interventions are needed that sensitize the community to confront gender and cultural norms that encourage, or at best do not seek to prevent or reject, acts of coercion.

Anonymous. "Gender Violence in Nigeria." *PLANFED News*, 6(2):5, January 2001.

In Nigeria, gender violence is a serious and common experience among women and girls in all six geographic zones in the country. Girls are made to do more of the household chores, and they experience more physical and verbal abuse, incest, and other forms of molestation and exploitation. Because of their immature reproductive systems and poor obstetric care, female adolescents are likely to get vesicovaginal fistula. Consequently, they are abandoned and stigmatized. The overall impact of violence on the reproductive health of

women is tremendous. Abused women tend to discard family planning services. Moreover, gender violence causes imbalance to the emotional lives of women. Hence, more and more women are pushed into drugs and prostitution. This trend has led to unwanted pregnancies in these female adolescents, who are also exposed to sexually transmitted infections, including HIV/AIDS, and gynecological problems. The Planned Parenthood Federation of Nigeria (PPFN) volunteers, under the dynamic leadership of the national president of PPFN, tackled the issues by working with other NGOs and with some religious and traditional leaders in the country. One of the challenges PPFN is poised to tackle is the empowerment of women and girls through the reduction of gender violence in the country.

Anonymous. "Where are the Nigerian Women?" *Gender Views*, 4(1):3–5, January–April 2000.

This paper looks into the visibility, status, and level of political participation of women in Nigeria in the precolonial, preindependence, and postindependence eras. Historians note that in the precolonial era, the corrosive, patronizing and often condescending influence of the British colonialists greatly contributed to eroding and retarding developments concerning the status of women. Some of the archcolonialists and their spouses brought with them their ideals of a woman's place in the family and society. However, during the preindependence period, many Nigerian women struggled side-by-side with their male counterparts to gain independence from the British. During the postindependence era, some women continued in the struggle for recognition, better status, and their participation in the democratic process and governance in the country. Although there have been developments in the political arena, close analysis of women's participation in other fields recorded that not much was actually achieved in terms of winning space and real participation in governance in all fields. This may be because of the culture and traditions that are deeply entrenched in patriarchy, a lack of adequate knowledge and statistics on the true position of women in respect of where they work, the status of their education, health, and general participation. A list of the names of Nigerian women in political positions is provided.

Fajemilehin, B.R. and B.J. Feyisetan. "The Widowhood Experience of the Elderly in Rural Communities of Southwestern Nigeria." *Nigerian School Health Journal*, 12(1–2):11–7, 2000.

The study, which used semistructured interviews and focus group discussions, was conducted in southwestern Nigeria. Two hundred and ten widowed individuals aged 60 years and above were the primary respondents. Other persons, identified by the elderly as primary support persons, were included in the study as secondary respondents. The study documented the elderly feelings and experiences about widowhood and its association with health and social status. Available support networks and the role of socioeconomic environment in the sustenance of life in widowhood were also identified. The study revealed, among other issues, that the majority of widowed elderly were in a state of fear, anxiety, helplessness, hopelessness, and loneliness. Of significance is the role of kinsmen and the value of money in the type of support available to widowed individuals.

Fayombo, G.A., A.A. Oyesoji, and C.A. Adeyoju. "Psycho-physical Assault: Ethnic and Differing Marital Experiences as Precursors of Women Abuse in Nigeria." *Nigerian School Health Journal*, 12(1–2):87–93, 2000.

This study employed a questionnaire, Marital Violence Tendency Scale (0.83), to measure precursors of abuse of women based on the ethnic, psychophysical assault and marital experiences of 247 married female Nigerians (mean = 40.3 years, standard deviation

= 7.6 years). A further breakdown of the sampled population revealed that 107 were from Ibadan (43.3 percent), 74 from Onitsha (29.9 percent), and 66 from Abuja (26.72 percent). Out of this group, 70.04 percent indicated that they had at one time or another been physically assaulted by their spouses. The analysis of variance and Z score were used for the analysis at 0.05 margin of error. The authors' findings revealed the following: a statistical significant difference was found among the three ethnic groups in their propensity towards spousal violence ($f = 40.2$, $df = 2,245$, $p < 0.05$) and that years of marital experience has no effect on women abuse ($z = 0.777$, < 1.960). The emerging findings above are thoroughly discussed in line with related studies in the body of the paper.

NGO Networks for Health. "Women's NGO Networks in Nigeria: Providing Reproductive Health Information and Services; Promoting Reproductive Rights." No. 4, p. 49, Washington, D.C.: NGO Networks for Health, 2001.

Nongovernmental Organization (NGO) Networks for Health is committed to identifying, documenting, and disseminating the experiences and lessons from partnerships among NGOs that successfully meet the growing demand for reproductive health (RH) services and information. This second issue of profiles on Nigerian women's networks focuses on women's NGOs working to improve and expand RH and reproductive rights in Nigeria. Data are taken from examinations of the social, political, and economic contexts in the country, discussions with 51 networks and indepth profiles of 30 of them, and focus group discussions. It is important to note that this exercise was undertaken to document the activities of the networks in delivering RH information and services and promoting reproductive rights. Over the years, the women's NGO networks have filled a vital role in providing a range of RH information and services to underserved communities in the country. With their notable successes, they have grown and matured at different rates and face a variety of challenges. Key overarching needs include improving managerial and administrative capacity, improving technical capacity, diversifying funding sources, advocating for government recognition, and strengthening internal democratic governance practices. Key lessons that have emerged are summarized and a number of recommendations for donors, women's NGO networks, and the government are cited.

IV. SAFE MOTHERHOOD

Maternal Mortality

Adewole, I.F. "Trends in Postabortal Mortality and Morbidity in Ibadan, Nigeria." *International Journal of Gynaecology and Obstetrics*, 38(2):115–8, June 1992 (Department of Obstetrics and Gynaecology, College of Medicine, University College Hospital, Ibadan, Nigeria).

Illegally induced abortion at the University College Hospital, Ibadan, increased steadily over a 10-year period (1980–89) despite the increasing availability of family planning services. Abortion was the most common cause of death in the gynecology service during the period of the study and constituted 36.6 percent of fatalities. The majority of patients (76.2 percent) did not accept contraceptives. Almost one third of illegal terminations were performed by physicians. Although the percentage of deaths decreased, the contribution of physicians to these fatalities increased, and accounted for six of nine (66.7 percent) fatalities in 1989. This circumstance probably signifies a defect in physician training and in the ability to perform postabortion care. Physicians should be trained in postabortion care, and laws should be changed in conjunction with a greater drive to improve contraceptive utilization and reduce the incidence of unsafely induced abortion.

Chiwuzie, J. and C. Okolocha. "Traditional Belief Systems and Maternal Mortality in a Semi-Urban Community in Southern Nigeria." *African Journal of Reproductive Health*, 5(1):75–82, April 2001.

Many factors are implicated in the poor maternal health conditions in Sub-Saharan Africa. Among the more popular focus are weak political and financial commitment, deteriorating institutional infrastructure, rapid population growth rates, pervasive poverty, and gender inequalities. Because of these and other related problems, pregnant women often face dangers, especially in emergencies. In a study conducted in Ekpoma, a semi-urban community in Edo State of southern Nigeria, it became evident that traditional beliefs and practices contribute immensely to the poor health status of pregnant women. These beliefs and practices are outlined in this study, and possible ways out of the identified problems are suggested. There is the need for a thorough investigation of extramedical factors in the design of any medical intervention program. A broader definition of maternal health, in line with the proposals of the global safe motherhood initiative, is advocated.

Harrison, K.A. and C.E. Rossiter. "Childbearing, Health and Social Priorities: a Survey of 22,774 Consecutive Hospital Births in Zaria, Northern Nigeria." *British Journal of Obstetrics and Gynaecology*, 92(Supplement 5):49–60, 1985.

There were 357 twin pairs, 6 sets of triplets, and 1 pair of conjoined twins born in the group of 15,020 booked women, compared with 392 twin pairs, 10 sets of triplets, 2 sets of quadruplets, and 2 sets of conjoined twins in the 7,654 emergency admissions (unbooked women). Rising maternal age, parity, and height were all associated with rising twinning rates. Maternal death rates were 0.8 percent for singleton pregnancies, 2.0 percent for twin pregnancies, 6.3 percent for triplet pregnancies, and none for the two women who had quadruplets. The mean fetal birthweights were 3.08 kg for singletons, 2.28 kg for twins, 1.71 kg for triplets, and 1.36 kg for quadruplets. Fetal loss was 10.5 percent for singletons, 24 percent for twins, 42 percent for triplets, and 75 percent for quadruplets. The poorer maternal and fetal outcomes in multiple pregnancy compared with those in singleton pregnancy were due to the combined effects of certain pregnancy complications, including

the retention of the second twin, inadequacies in the health care facilities, and unfavorable socioeconomic circumstances, especially lack of antenatal care.

Iloabachie, G.C. and S. Agwu. "The Increasing Incidence and Declining Mortality of Ruptured Uterus in Enugu." *Journal of Obstetrics and Gynaecology*, 10(4):306–11, April 1990.

A 10-year review of ruptured uterus cases at the University of Nigeria Teaching Hospital disclosed an incidence of 1 in 500 deliveries. The average incidence for booked patients alone was 1 in 1,271 deliveries. The maternal and perinatal mortalities were 17 percent and 91 percent, respectively, while the contributions of ruptured uterus to the overall hospital maternal and perinatal mortalities for the period under review were 4.1 and 2.6 percent, respectively. In 1978, the average incidence of ruptured uterus in all patients delivered at the hospital increased from 1 in 787 in the first five years to 1 in 330 in the second five years, while the maternal mortality from ruptured uterus decreased from 27 percent in the first half to 10 percent in the second half of the study. The decline in maternal mortality in this environment is due to improved availability of stored blood and management, which included subtotal hysterectomy in many cases.

Ogunniyi, S.O. and B.L. Faleyimu. "Trends in Maternal Deaths in Ilesa, Nigeria, 1977–1988." *West Africa Journal of Medicine*, 10(1):400–4, January–March 1991 (Department of Obstetrics and Gynaecology, Obafemi Awolowo University Teaching Hospitals, Ile-Ife, Nigeria).

Cases of maternal deaths at Wesley Guild Hospital, Ilesa, Nigeria, from January 1977 to June 1988, were reviewed. The maternal mortality rate of 2.85 per 1,000 births recorded is an improvement over earlier figures due at least in part to improved obstetric care services. Illegally induced abortion was the most significant cause of maternal deaths (32.7 percent). Other causes were sepsis (17.3 percent), obstetric hemorrhage (15.4 percent), ruptured uterus (9.6 percent), and anemia (7.7 percent). The problems of illegal abortion, poor antenatal and delivery supervision, and late referral of cases were implicated as etiologic factors.

Okaro, J.M., A.C. Umezulike, H.E. Onah, L.I. Chukwuali, and O.F. Ezugwu. "Maternal Mortality at the University of Nigeria Teaching Hospital, Enugu, Before and After." *African Journal of Reproductive Health/Revue Africaine de la Santé Reproductive*, 5(2):90–7, August 2001.

A comparative retrospective analysis of maternal deaths at the University of Nigeria Teaching Hospital, Enugu, Nigeria, was carried out for two 10-year periods, 1976–85 and 1991–2000, in order to evaluate the effect of the safe motherhood initiative on maternal mortality in the hospital. Variables for the two periods were compared by means of the t-test at a 95 percent confidence level. Maternal mortality ratio (MMR) was significantly higher in period II than in period I (1,406 versus 270 per 100,000); $p = 0.00$). The leading causes of maternal death were uterine rupture for period I and septicemia for period II. Although from the first to the second 10-year period there was a significant decrease in the number of midwives, physicians, and nurse anesthetists, there was more than a proportionate decrease in the number of deliveries. There was also an increase in the incidence of anemia due to diminished standards of living and in the mean decision-intervention interval (1.5 +/- 0.5 hours versus 5.8 +/- 1.2 hours; $p = 0.000$) as a result of worker dissatisfaction and changes in hospital policies. The authors conclude that since the launching of the safe motherhood initiative, the MMR at the University of Nigeria Teaching Hospital has increased fivefold as a result of institutional delays and a deterioration in the living standards of Nigerians, both consequences of a depressed economy. To halt this trend, the authors recommend that the

living standard of all Nigerians should be improved. Furthermore, health care personnel should be motivated through enhanced salaries and the provision of working materials, including efficient mobile telephone services.

Okolocha, C., J. Chiwuzie, S. Braimoh, J. Unuigbo, and P. Olumeko. "Sociocultural Factors in Maternal Morbidity and Mortality: A Study of a Semi-Urban Community in Southern Nigeria." *Journal of Epidemiology and Community Health*, 52(5): 293–7, May 1998 (Department of Sociology and Anthropology, University of Benin, Nigeria).

Study objective: To understand community-based or sociocultural factors that determine maternal morbidity and mortality in a semi-urban setting. **Design:** The study is an exploratory, multidisciplinary operations research project and the instruments were focus groups and interviews. **Setting:** Ekpoma, a semi-urban community with a population of 70,000 in the central part of Edo State in southern Nigeria. **Participants:** Thirteen groups of women, two groups of men, and two groups of traditional birth attendants. **Results:** There is a fairly good knowledge of hemorrhage but this is circumscribed by attitudes, practices, and situations that keep women away from or delay the decision to seek modern obstetric care. **Conclusions:** For a fuller understanding of maternal morbidity and mortality, it is important to consider factors outside the hospital and formal medical practice. Furthermore, a change of existing knowledge, attitudes, practices, and situations can be enhanced through modeling on them.

Okonkwo, A.T. "Nigeria's Government Tackles Maternal Mortality." *Lancet*, 6(360):65, July 2002.

This news article reports on the Nigerian government National Program for the Prevention of Maternal Mortality (NPPMM), which will expand and strengthen advocacy projects for safe motherhood and create better access to antenatal facilities for the 27 million women who are of reproductive age in Nigeria. It was noted that the project's major constraint was the lack of funds, and the project would not have made any headway without foreign aid. The government's NPPMM plan called for the assistance of foreign health partners to provide medical facilities and technical assistance for the program because Nigeria could not bear the burden alone.

Olatunji, A.O. and A.O. Sule-Odu. "Maternal Mortality at Sagamu, Nigeria—A Ten-Year Review (1988–1997)." *Nigerian Postgraduate Medical Journal*, 8(1):12–5, March 2001 (Department of Obstetrics and Gynaecology, Obafemi Awolowo College of Health Sciences).

A review of maternal deaths at the Ogun State University Teaching Hospital, Sagamu, Nigeria over a 10-year period is presented. During the period, there were 92 maternal deaths, including those from abortion and ectopic pregnancy. The total deliveries were 5,423, giving an MMR of 1,700 per 100,000. Ruptured uterus was the most common cause, followed by eclampsia, postpartum hemorrhage, and complications of abortion, in that order. Unbooked patients constituted about one third of the total (29.1 percent). Primipara and grandmultipara were the most at risk of maternal death, and the risk of dying following operative delivery was 6 times that of vaginal delivery. Easy access to affordable antenatal care, good blood transfusion services, more widespread use of contraceptives, and training of traditional birth attendants would help reduce the risk of maternal death.

Onwuhafua, P.I., A. Onwuhafua, and J. Adze. "The Challenge of Reducing Maternal Mortality in Nigeria." *International Journal of Gynaecology and Obstetrics*, 71(3):211–3, December 2000.

Despite the efforts of the safe motherhood initiative in Nigeria, maternal mortality remains a neglected problem in the country. The MMR is 652 per 100,000, and abdominal deliveries were approximately 5 times more common than vaginal deliveries. Nulliparity carried the greatest risk of maternal death (1,072 per 100,000); also, this group contributed to the highest number of abortion-related deaths. Aside from abortion, eclampsia, ruptured uterus, obstetric hemorrhage, anesthetic death, puerperal sepsis, and amniotic fluid infusion contributed to the direct cause of maternal mortality. Due to the failure of the safe motherhood initiative, a structural adjustment program is needed for intensification of mass education; provision of family planning services, especially for adolescents; training of additional obstetricians and midwives; and retraining of traditional birth attendants.

Ufford, J. and M. Menkiti. "Delivery Care is Key for Maternal Survival: A Story of Two States in Nigeria." Web document found at www.prb.org, December 2001.

Annually, 45,000 women die in childbirth in Nigeria. According to the 1999 Nigeria Demographic and Health Survey, many of the deaths occur because of early childbearing. WHO states that excessive loss of blood, infection, premature and obstructed labor, complications of unsafe abortion, and pregnancy-induced hypertension contribute to maternal mortality. Indirect causes are due to conditions aggravated by pregnancy, such as anemia, HIV/AIDS, malaria, and malnutrition. Hence, the single most effective way to reduce maternal deaths is to provide skilled care by skilled attendants during and after childbirth, according to Family Care International, an international reproductive health NGO. However, skilled health professionals are in short supply in Nigeria. In addition, cultural, logistical, and financial barriers also increase a woman's risk of dying while giving birth. Furthermore, the inadequacy of staffing and facilities at some hospitals contribute to a woman's risk of dying. Thus, some state-level policymakers in Nigeria are working to eliminate barriers in obtaining obstetric care.

Ujah, I.A., V.E. Uguru, A.O. Aisien, A.S. Sagay, and J.A. Otubu. "How Safe is Motherhood in Nigeria? The Trend of Maternal Mortality in a Tertiary Health Institution." *East African Medical Journal*, 76(8):436–9, August 1999 (Department of Obstetrics and Gynaecology, Faculty of Medical Sciences, University of Jos, Nigeria).

Objective: To determine the magnitude and trend of maternal mortality in Jos University Teaching Hospital, Jos, Nigeria. **Design:** Retrospective study. **Setting:** Jos University Teaching Hospital. **Subject:** All women dying in pregnancy, labor, and puerperium. **Main outcome measures:** Maternal mortality ratio, trend of maternal mortality, age, antenatal booking status, educational status, main causes of maternal death, and factors contributing to maternal deaths. **Results:** The maternal mortality ratio was 739 per 100,000 total deliveries and the trend rose from 450 per 100,000 in 1990 to 1,060 per 100,000 total deliveries in 1994. About 33 percent of all maternal deaths occurred among teenagers. The risk factors for maternal deaths included adolescence, grand multiparity, illiteracy, and nonutilization of antenatal services. The main causes of maternal mortality were hemorrhage (28.1 percent), sepsis (21.3 percent), and eclampsia (15.7 percent). The contributions of complicated induced abortion and anesthetic deaths in this study are worthy of mention. **Conclusion:** The MMR is unacceptably high in Jos University Teaching Hospital, more particularly because of the rising trend. Sociocultural and economic factors contributed immensely to the high maternal mortality in Jos. The objective of WHO to reduce maternal mortality by 50 percent by the year 2000 will not be achieved in this part of Nigeria. Nonetheless, improvement of the nation's economy coupled with a stable policy and provision of infrastructural facilities will assist in significantly reducing maternal mortality.

Maternal Health Services

Brieger, W.R., K.J. Luchok, E. Eng, and J.A. Earp. "Use of Maternity Services by Pregnant Women in a Small Nigerian Community." *Health Care for Women International*, 15(2):101–10, March 1994.

Pregnancy is a time when women's health is placed at risk by a host of factors; however, professionals providing antenatal care can reduce that risk by monitoring women's health regularly and offering preventive services. Hygienic delivery services by a qualified attendant also help to reduce risks associated with childbearing. These considerations were explored in a rural Nigerian town by following 60 Yoruba women through pregnancy to childbirth. Although a functioning government maternity center in the community offered a full range of antenatal and delivery services, most of the women did not register for antenatal care until their sixth month of pregnancy or later, and 65 percent delivered at home. This behavior is explained in terms of fees for delivery services, level of income, cultural beliefs, and education. The conclusion is that the provision of relatively accessible services does not guarantee their use and that other social and cultural considerations must be taken into account.

Etuk, S.J. and E.E. Asuquo. "Effects of Community and Health Facility Interventions on Postpartum Hemorrhage." *International Journal of Gynaecology and Obstetrics*, 70(3):381–3, September 2000.

In Calabar, West Africa, the prevention of maternal mortality multidisciplinary team was launched in response to the international call for action on the issue of high lifetime risk of maternal mortality noted in Sub-Saharan Africa. The prevention of maternal mortality team conducted research and identified postpartum hemorrhage as a major cause of maternal mortality in the area. In addition, blood supply inadequacy was noted as the main predisposing factor for such deaths. In view of this, the team launched several intervention programs that included 15 education and mobilization campaigns and blood donation campaigns emphasizing the importance of blood transfusion in saving lives. To assess its effects, preintervention and postintervention case notes of all patients who had primary postpartum hemorrhage at the University of Calabar Teaching Hospital were reviewed. Results showed that the interventions changed the blood availability for transfusion in the area from 39.4 percent in the preintervention period to 79.2 percent in the postintervention period ($p < 0.00001$). Moreover, the primary postpartum hemorrhage case fatality rate dropped from 12.3 percent in the preintervention years to 5.4 percent in the postintervention period ($p < 0.05$). These results underscore the need for policymakers to make resources available to enable the sustenance of these intervention programs.

Fajemilehin, R.B. "Factors Influencing High Rate of 'Born-Before-Arrival' Babies in Nigeria—A Case Control Study in Ogbomosho." *International Journal of Nursing Studies*, 28(1):13–8, 1991 (Department of Nursing, Faculty of Health Sciences, Obafemi Awolowo University, Ile-Ife, Oyo State, Nigeria).

The purposes of this study were to examine the records of the birth-before-arrival mothers in order to identify factors which might explain why so few booked for hospital care and also to identify the postdelivery problem that led them to seek professional help. Data from the hospital records and interviews with some of the 377 born-before-arrival mothers seen at the Baptist hospital, Ogbomosho, Oyo State, Nigeria, between 1982 and 1985 were analyzed using descriptive statistical methods. Findings indicated that 65 percent of the mothers attending after delivery outside hospital had been delivered by a traditional birth attendant. Of these, 73.7 percent sought hospital attention following retained placenta with

bleeding. The first step toward improving perinatal care will be the official integration of the indigenous midwives into the national health service to enhance organized programs of training for traditional birth attendants. The implications of these findings suggest that traditional birth attendants and professional care providers in Nigeria should improve liaison and cooperation among themselves so as to correct the imbalance in health service provision between major cities and rural areas.

Gharoro, E.P. and A.A. Igbafe. "Shared Antenatal Care to Increase Utilization of Maternity Services." *International Journal of Gynaecology and Obstetrics*, 69(2):155–7, May 2000.

This study assesses patients' satisfaction with antenatal services offered at antenatal units in Benin City, Nigeria. A total of 950 pregnant women from the University of Benin Teaching Hospital, the Catholic Maternity Hospital, and the Anglican Women Hospital completed the structured questionnaires. The inquiry included personal data, place of domicile, information on antenatal booking, and maternity service utilization. Overall, findings show that patients' major reasons for not attending could be grouped as dissatisfaction with the service, cost, and time spent to purchase services. In addition, patients complained of the distance of the institution from the town. Furthermore, about one third (31.05 percent) of the patients were completely satisfied with the service currently being received at the various maternity units in town. The reasons for not attending antenatal care in the University of Benin Teaching Hospital were multiple and in various combinations. Two hundred and ninety-five mothers (31.05 percent) were satisfied with their present centers and did not want a change. This study concluded that patient satisfaction and aversion for obstetric interventions could be improved by shared antenatal care to increase utilization of maternity services. The introduction of a midwife-managed care unit in the department for the management of low-risk mothers is recommended.

Konje, J.C., K.A. Obisesan, and O.A. Ladipo. "Obstructed Labor in Ibadan." *International Journal of Gynaecology and Obstetrics*, 39(1):17–21, September 1992.

Over a 13-year period, 380 cases of obstructed labor were managed among 39,456 deliveries. Absent prenatal care and poor intrapartum care at peripheral hospitals were major contributing factors. The average duration of labor in those with obstruction was 3 times that of the normal obstetric population. About 82 percent of patients with obstruction had an emergency Caesarean section, while 10 percent had destructive operations. The main etiological factor was unrecognized positional disproportion. Common associated complications were ruptured uterus and genital and wound sepsis. Maternal and perinatal morbidity and mortality were high. Adequate health education, incorporation of traditional birth attendants into health care programs, and the provision of more health care centers will reduce the occurrence of this complication.

Lacey, L., V. Adeyemi, and A. Adewuyi. "A Tool for Monitoring the Performance of Family Planning Programs in the Public and Private Sectors: an Application in Nigeria." *International Family Planning Perspectives*, 23(4):162–7, December 1997.

Makinde, O.O. and S.O. Ogunniyi. "Ectopic Pregnancy in a Defined Nigerian Population." *International Journal of Gynaecology and Obstetrics*, 33(3):239–41, November 1990.

All cases of ectopic pregnancy in the Ile-Ife Teaching Hospital between 1977–87 were reviewed. The incidence per 1,000 births was 4.76; this condition accounted for 2.75 percent of all gynecologic admissions. The associated mortality was low (0.5 percent). Increasing incidence was observed during the study period, as was an increasing proportion of nulliparous patients. Tubal damage from pelvic infections might account for the trends.

Nwakoby, B.N. "The Influence of New Maternal Care Facilities in Rural Nigeria." *Health Policy Planning*, 7(3):269–78, September 1992.

Intrapartum care was begun in a public sector comprehensive health center in Obukpa Town, a rural Nigerian community in May 1987. Its influence on the utilization pattern of maternal health care services was studied in a sample of 488 women who underwent an abortion or childbirth between 1987 and 1989. There was an increase in utilization of prenatal care facilities in the comprehensive health center, from 52 percent in 1987 to 66 percent in 1989, and a decline in the use of other health facilities, from 41 percent to 31 percent. Use of the comprehensive health center for intrapartum care increased from 15 percent in 1987 to 36 percent 1989, while home delivery declined from 60 percent to 38 percent in the same period. Use of other health institutions for delivery remained unchanged. Logistic regression analysis showed that the place of delivery and attendant at delivery varied significantly with year of delivery. Women were more than twice as likely to deliver in health institutions (OR = 2.216, $p = 0.01$) and to be attended by trained staff (OR = 2.525, $p = 0.003$) in 1989 than in 1987. The cost of service was found to be about the same for the public and private sectors for prenatal care and marginally lower for intrapartum care at the comprehensive health center. Service by traditional birth attendants was free or paid for in kind. The use of the comprehensive health center was shown to decline with increasing distance from a woman's residence, and distance was considered the determining factor in the choice of a private or public health care institution. The implications of these findings for maternal health policy are discussed and recommendations for change are made.

Nwakoby, B.N. "Use of Obstetric Services in Rural Nigeria." *Journal of the Royal Society of Health*, 114(3):132–6, June 1994 (Department of Community Medicine, College of Medicine, University of Nigeria, Enugu).

The pattern and determinants of maternal service utilization were studied in a rural Nigerian community. The study sample consisted of 488 randomly selected women who had a childbirth or an abortion between May 1987 and September 1989. Although 93 percent registered for prenatal care in a health care institution, only 51 percent delivered in a health institution, while 49 percent delivered at home, mainly under the care of traditional birth attendants. Factors found to be most consistently associated with the use of health institutions for delivery were maternal education and occupation, religion, and occupation of the husband. Maternal age, parity, marital status, and place of residence were not significantly associated with the choice between home and institutional delivery. Logistic regression analysis was used to determine the odds ratio and to quantify the weight of these independent variables found to be significantly associated with the place of delivery as the outcome variable.

Obi, S.N., B.C. Ozumba, and J.M. Okaro. "Emergency Obstetric Referrals at a University Teaching Hospital, Nigeria." *East Africa Medical Journal*, 78(5):262–4, May 2001 (Department of Obstetrics and Gynaecology, University of Nigeria Teaching Hospital, Enugu).

Objective: To identify factors in unbooked obstetric emergency cases that contribute to the increase in maternal mortality. **Design:** A retrospective study. **Setting:** Maternity Ward, University of Nigeria Teaching Hospital, Enugu, Nigeria, between January 1966 and December 1999. **Subjects:** Four hundred and thirty-five cases of emergency obstetric referrals treated during the review period. **Results:** The incidence of unbooked obstetric emergencies is 9.5 percent and the high risk obstetric group, the primigravida and grand multiparous women constituted 63 percent of it. The majority (80 percent) of the patients

belonged to the lower socioeconomic class and prolonged and obstructed labor were the most common mode of presentation. Sources of referrals were hospital/clinics (46 percent), maternity homes (23 percent), traditional birth attendants (16 percent), and prayer houses (2.3 percent). There were obvious delays at the referral sources and most of the patients presented in poor clinical states. Forty percent of total maternal mortality in the hospital was attributed to unbooked cases, with hemorrhage and sepsis being the major causes. Also, perinatal mortality of 40.2 percent was recorded. **Conclusion:** Lack of basic education and poverty are the major identifiable risk factors. Improving health care facilities, female education, regular training courses for medical personnel, and elimination of unqualified practitioners are advocated.

Okafor, C.B. and R.R. Rizzuto. "Women's and Health Care Providers' Views of Maternal Practices and Services in Rural Nigeria." *Studies in Family Planning*, 25(6 Pt. 1):353–61, November–December 1994 (Women's Health Unit, College of Medicine, University of Nigeria).

Maternal mortality and morbidity estimates in Nigeria continue to be dramatically high, largely because maternal services, especially in rural areas, are often deficient and inappropriate to women's situations. The Safe Motherhood Project in zone A examined the pregnancy-related knowledge, attitudes, and practices of community members as well as women's use of community maternal health services. Focus group discussions and interviews confirmed a number of recent findings by other studies; they also documented extensive hostility between the two most commonly used health care providers, traditional birth attendants and midwives. The hostility resulted in rumors, deliberate attempts to discourage women from seeking higher levels of care, and refusals to accept referrals or treat patients, which were found to be serious constraints to good maternal care in the targeted rural area.

Okafor, C.B. "Availability and Use of Services for Maternal and Child Health Care in Rural Nigeria." *International Journal of Gynaecology and Obstetrics*. 34(4):331–46, April 1991.

A personal, inhome interview was conducted in four rural towns in Nigeria, whose aims were to describe the content of maternal and child health (MCH) care in these rural towns and to assess how patterns of prenatal, delivery, and postnatal service use are related to a variety of demographic and socioeconomic variables in the population. Findings from data analysis indicate that services available are deficient in terms of the number of centers and content of care. Variables found to be statistically significant ($p = 0.01$) for use of services are maternal education, occupation, distance, and previous use of a physician. Husband occupation was significant only for prenatal registration but not for subsequent use of services. Recommendations include a reorganization of rural MCH services and an introduction of female literacy programs, especially at the rural level.

Olukoya, A.A. "Identification of Underweight Women by Measurement of Arm Circumference." *International Journal of Gynaecology and Obstetrics*, 31(3):231–5, March 1990 (Institute of Child Health and Primary Care, College of Medicine, Lagos, Nigeria).

A survey in Nigeria showed a strong correlation between the arm circumference of women and their weight. This may be useful in assessing the nutritional status of women. The sensitivity and positive predictive values of mid-arm circumference less than 23 cm for maternal weight less than 45 kg was 62.3 and 44.2 percent, respectively. Strips based on this principle can be used by lower cadres of health workers, such as traditional birth attendants, as a screening tool for women nutritionally at risk.

Ozumba, B.C. and H. Uchegbu. "Incidence and Management of Obstructed Labour in Eastern Nigeria." *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 31(3):213–6, August 1991 (Department of Obstetrics and Gynaecology, University of Nigeria Teaching Hospital, Enugu).

Over a five-year period (1985–89), 527 cases of obstructed labor were recorded, while 11,299 deliveries were conducted, giving an incidence of 4.7 percent. The majority of the patients (59 percent) were primigravidae. The incidence of obstructed labor was much higher for the unbooked patients (33 percent) than for the booked patients (1.7 percent). Cephalopelvic disproportion was the greatest cause of obstructed labor (67 percent), while Caesarean section was the main method of delivery (85 percent). The leading complications of obstructed labor were puerperal sepsis (57 percent), postpartum hemorrhage (15 percent), uterine rupture (14 percent), and genital tract laceration (14 percent). A maternal mortality rate of 32 per 1,000 and a perinatal mortality rate of 294 per 1,000 were recorded. Education of primary health providers and traditional birth attendants on the dangers of obstructed labor and the need for early referral is suggested to reduce the incidence of this condition. Governmental assistance is also required to improve existing health facilities so that antenatal and delivery services will be affordable to all pregnant women in the society.

Traditional Birth Attendants

Abioye-Kuteyi, E.A., S.O. Elias, A.F. Familusi, A. Fakunle, and K. Akinfolayan. "The Role of Traditional Birth Attendants in Atakumosa, Nigeria." *Journal of the Royal Society of Health*, 121(2):119–24, June 2001 (Department of Community Health, Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria).

All 26 traditional birth attendants (TBAs) and their 109 clients in 15 settlements in Atakumosa West LGA in Nigeria were interviewed to assess TBA training, practices, and utilization. The study showed that more than 80 percent of TBAs were older women with more than four children, practiced single-handedly, and held other occupations. About 54 percent of those studied had no designated room for deliveries; 21 (80.8 percent) did not consider any pregnant woman to be at high risk; 3 (11.5 percent) perform intravaginal examinations during labor, and only a few recognize complications; 12 (46.2 percent) never refer patients. Despite these deficiencies, TBAs continue to practice in appreciable numbers and their services continue to be on demand in the communities under study. Nearly all of the clients interviewed had started to use TBAs by the age of 25, and 50 percent had used TBAs for all of their deliveries. Most TBAs provide antenatal care, and 77 percent had a case load of less than five clients per month. Ninety-six percent of the clients had not been referred by the TBA before. Sixty-one percent of the clients believed that TBAs would be used in a future pregnancy and 49 percent would recommend TBA care to other women. Low socioeconomic status, illiteracy, poor awareness of modern maternal health facilities, personalized care, strong family influence, and easy access to TBA services were strong factors promoting traditional midwifery in the LGA. If adequately trained, equipped, supported and supervised, TBAs can contribute to safe motherhood in Nigeria and in other developing countries.

Isenalumbe, A.E. "Integration of Traditional Birth Attendants into Primary Health Care." *World Health Forum*, 11(2):192–8, 1990 (Institute of Child Health, University of Benin, Nigeria).

An evaluation of domiciliary midwifery services in a suburban area of Benin City, Nigeria, revealed that mothers liked them mainly because of the provision for home delivery. The integration of TBAs into organized health care was considered desirable by both

mothers and the midwifery staff. Domiciliary midwifery services are recommended as a means of integrating TBAs into primary health care.

Itina, S.M. "Characteristics of Traditional Birth Attendants and Their Beliefs and Practices in the Offot Clan, Nigeria." *World Health Organization Bulletin*. 75(6):563–7, 1997 (St. Luke's Hospital, Anua, Akwa Ibom State, Nigeria).

This article presents the findings of a survey of a group of 52 TBAs in a clan in southeastern Nigeria. The purpose of the study was to develop a database from which to design an effective program for TBAs in the safe delivery and early referral of women with complications to the hospital. The study showed that the majority of TBAs were illiterate and had no previous experience or training, even informal training, when they took on the TBA role. Ignorance about maternal complications during childbirth and the appropriate treatment was evident for most of the group. A small number of the group relied solely on divine revelation for guidance in the management of childbearing women. The results of the survey clearly showed that educational programs for TBAs and better integration into the health care system are essential for lowering maternal mortality and morbidity rates in areas where most mothers are not open to nor have access to professional care in childbirth.

Odebiyi, A.I. "Western Trained Nurses' Assessment of the Different Categories of Traditional Healers in Southwestern Nigeria." *International Journal of Nursing Studies*, 27(4):333–42, 1990 (Department of Sociology, Obafemi Awolowo University, Ile-Ife, Nigeria).

Different categories of traditional healers were assessed by randomly selected, Western-trained nurses. TBAs were rated as the most effective type of healers, followed by traditional psychiatrists and herbalists, respectively. The least rated were the diviners, traditional bone setters, and pharmacists. The majority of the nurses believed that traditional healers are effective, but the degree of effectiveness varies with the specialization of the healers. A large percentage of the nurses (44 percent) favored formal collaboration between practitioners of the two medical systems. All nurses who perceived some healers as effective also stated that they would be prepared to work with them, although as their superiors. Of particular importance is the issue that categories of traditional healers should not be classed together; there are different types, each having its own peculiarities and usefulness.

Okafor, C.B. "Folklore Linked to Pregnancy and Birth in Nigeria." *Western Journal of Nursing Research*, 22(2):189–202, March 2000 (School of Health, Physical Education and Leisure Services, University of Northern Iowa, USA).

As a part of a safe motherhood project implemented in eastern Nigeria between 1992 and 1996, inhouse interviews were conducted with rural women and TBAs in the seven states of eastern Nigeria. The overall project was designed to contribute toward the reduction of maternal mortality and morbidity through the involvement of community leaders and women's organizations in women's health activities in rural Nigeria. It also focused on identifying and addressing some of the underlying cultural factors in maternal mortality and morbidity in Nigeria. Findings from the interviews show that women in rural eastern Nigeria still hold many folkloric beliefs about pregnancy and childbirth, and some of these beliefs lead to delay in the referral of complications to hospitals.

Sogunro, G.O. "Traditional Obstetrics: A Nigerian Experience of a Traditional Birth Attendant Training Program." *International Journal of Gynaecology and Obstetrics*, 25(5):375–9, October 1987 (Department of Community Health Sciences, College of Allied Medical Sciences, King Saud University, Riyadh, Kingdom of Saudi Arabia).

A survey was conducted of 150 TBAs living in the periurban slum area of Ibadan, Oyo State, Nigeria. The purpose was to determine demographic characteristics as well as knowledge about midwifery practices prior to introducing a training program. The participants in the survey had volunteered for a free, 3-week training program in modern obstetrics. Information collected by questionnaire was read to participants. The findings show that useful service is being rendered by the TBAs and that there are areas where the introduction of simple methods of aseptic technique, changes in some nutritional practices, and increased knowledge of the benefits of immunization may improve the outcome for mothers and infants living in traditional societies in Nigeria. The findings serve as a guide for the development of content of TBA training programs.

Umar, U.S, E.A. Olumide, and S.B. Bawa. "Voluntary Health Workers' Knowledge, Attitude and Practices Regarding Recordkeeping in Akinyele LGA of Oyo State, Nigeria." *Nigerian Postgraduate Medical Journal*, 9(1):17–22, March 2002 (Department of Preventive and Social Medicine, University College Hospital, Ibadan, Nigeria).

Lack of basic health data for monitoring and evaluation of health services continues to affect the planning, implementation, and evaluation of health services in Nigeria. This has contributed to the poor health status and inefficient health services in the country. In the primary health care management information system (PHCMIS), voluntary village health workers (VHWs) and TBAs are responsible for collecting information at the community/village level. Trained research assistants administered a pretested, semistructured questionnaire and filled an observation checklist for all voluntary health workers in Akinyele LGA of Oyo State, in a cross-sectional survey conducted to assess their recordkeeping practices as well as their knowledge of and attitude towards it. Results showed that almost half of the respondents had no formal education and a similar proportion had been VHWs for over 10 years. Over 80 percent knew the uses of recordkeeping for monitoring and evaluation purposes. Their attitude towards it was positive and almost all thought that it was easy to keep records. Ninety-six percent keep records of their health activities and most forward them. It was observed that only 11 (10.8 percent) respondents had the VHW/TBA record of work produced and recommended by the federal Ministry of Health because they were reportedly not supplied to them. The factors that were associated with recordkeeping practices were positive attitude towards recordkeeping, duration of work as a VHW/TBA, prior training on recordkeeping and receiving feedback on records kept. Recommendations made included periodic training and retraining of the VHWs on recordkeeping, ensuring a consistent supply of record forms, and providing regular feedback to the VHWs on records kept.

Abortion

Abiodun, O.A., O.O. Adetoro, and O.O. Ogunbode. "Psychiatric Morbidity in a Pregnant Population in Nigeria." *General Hospital Psychiatry*, 15(2):125–8, March 1993 (Department of Behavioural Sciences, Faculty of Health Sciences, University of Ilorin, Nigeria).

Psychiatric morbidity among 240 pregnant women attending an antenatal unit was assessed by a two-stage screening procedure, using the General Health Questionnaire (GHQ–30) and Present State Examination Schedule (PSE). The prevalence of psychiatric morbidity was found to be significantly associated with younger age (under 24 years), being primigravid, married for less than one year, having an unsupportive husband, and having a previous history of induced abortion. It is suggested that more attention needs to be paid to the mental health of pregnant women in developing countries (where pregnancy rates and the

risks associated with pregnancy/delivery are much higher than in developed countries) at the primary, secondary, and tertiary levels of health care.

_____. "Psychiatric Morbidity in a Gynaecology Clinic in Nigeria." *Journal of Psychosomatic Research*, 36(5):485–90, July 1992 (Department of Behavioural Sciences, Faculty of Health Sciences, University of Ilorin, Nigeria).

Psychological disorders among 233 women attending a gynecology outpatient clinic were assessed by a two-stage screening procedure, using the GHQ–30 and the PSE. The prevalence of psychiatric disorders was found to be 35.2 percent. Psychiatric morbidity was significantly associated with a history of induced abortion, previous marriages, having no children, complaints of menstrual abnormalities, chronic pelvic pain, and having unsupportive husbands. It is suggested that more attention needs to be paid to the psychological health of patients with gynecologic disorders (in line with the biopsychosocial model of health care). This will ensure an overall improvement in the quality of care.

Adesola, K.A. and S.O. Ogunniyi. "Hysterectomies in Nigerians: Histopathological Analysis of Cases Seen in Ile-Ife." *Nigerian Postgraduate Medical Journal*, 8(1):37–40, March 2001 (Department of Morbid Anatomy and Forensic Medicine).

The purpose is to review, retrospectively, hysterectomy specimens sent to the histopathological department of the Obafemi Awolowo University Teaching Hospital Complex, Ile-Ife, Nigeria, in order to document the histopathological findings and relate these to the age of patients. The records of patients with hysterectomy specimens sent to the histopathological laboratory within a period of 10 years were studied. Some of the histological slides were reviewed. The diagnosis of uterovaginal prolapse was based on clinical as well as pathological findings. Three hundred and thirty hysterectomy specimens were studied. Women aged 40–49 accounted for the highest number of cases. Hysterectomy was most often performed for leiomyoma (48 percent), followed by uterovaginal prolapse (17 percent). In women over the age of 70, hysterectomy was most often performed for uterovaginal prolapse. Complication of pregnancy still accounted for a high percentage of hysterectomy (11 percent). Most were antepartum and postpartum hemorrhages as well as septic abortion in young women. Ten of the specimens were normal, both grossly and microscopically. Six of these were removed for suspected leiomyoma. The peak age of incidence for women with leiomyoma who had hysterectomy corresponds with the overall peak age for women who had hysterectomy. Leiomyoma was the most common finding in hysterectomy specimens. However, clinicians should ensure that the condition is accurately diagnosed in all cases to avoid removal of a normal uterus.

Adetiloye, V.A. and F.O. Dare. "Sonographic Evaluation of Induced Abortion—Experience in Nigeria." *African Journal of Medicine and Medical Science*, 27(3–4):155–9, September–December 1998 (Department of Radiology, College of Health Sciences, Obafemi Awolowo University, Ile-Ife, Nigeria).

A sonographic evaluation of 46 patients with suspected complications of unsafe induced abortion was performed prospectively. The sonographic features were correlated with surgical findings. Based on the sonographic findings, the patients were categorized into three groups. There was no clear association between the severity of sonographic or pathological findings and the time of presentation for ultrasound after the termination of pregnancy, but most of the patients presenting after 5 days belonged to groups II and III, that is, they had uterine complications with or without abdominopelvic complications. The most common complication, sepsis, is variably expressed sonographically in all groups. Although the sonographic appearances of sepsis are similar to those seen in pelvic inflammatory

disease, some features seen with postabortal sepsis are peculiar. Apart from sepsis, other complications of abortion presented nonspecific sonographic features. Pseudouterus appearance was demonstrated in one patient after hysterectomy. The likelihood of preoperative diagnosis of uterine perforation is high when the presentation is early before the formation of complex echo patterns of sepsis or in the absence of free intraperitoneal gas from bowel perforation or gas-forming organism. Routing manual vacuum aspiration or therapeutic endometrial curettage is unnecessary where sonography shows no evidence of retained products after an abortion.

Adetoro, O.O., A.B. Babarinsa, and O.S. Sotiloye. "Sociocultural Factors in Adolescent, Septic, Illicit Abortions in Ilorin, Nigeria." *African Journal of Medicine and Medical Science*, 20(2):149–53, June 1991 (Department of Obstetrics and Gynaecology, University of Ilorin, Nigeria).

One hundred and ninety-two adolescents (aged 12–18) with illicit septic abortions were interviewed to assess sociocultural factors associated with illegally induced septic abortions at Ilorin, Nigeria. They were mostly unmarried schoolgirls who were ignorant of contraception. Inadequate parental supervision contributed largely to unplanned pregnancies, while poor economic state of these patients influenced the occurrence of illegal septic abortions. Widespread availability of an acceptable family life education, with improved socioeconomic state of the adolescents, would most probably reduce the sociocultural factors favoring illicit septic-induced abortions in this community.

Adewole, I.F. "Trends in Postabortal Mortality and Morbidity in Ibadan, Nigeria." *International Journal of Gynaecology and Obstetrics*, 38(2):115–8, June 1992 (Department of Obstetrics and Gynaecology, College of Medicine, University College Hospital, Ibadan, Nigeria).

Illegally induced abortion at the University College Hospital, Ibadan, increased steadily over a 10-year period (1980–89) despite increasing availability of family planning services. Abortion was the most common cause of death in the gynecology service during the period of the study and constituted 36.6 percent of fatalities. The majority of patients (76.2 percent) did not accept contraceptives. Almost one third of the illegal terminations were performed by physicians. Although the percentage of deaths decreased, the contribution of physicians to these fatalities increased, and accounted for six of nine (66.7 percent) fatalities in 1989. This circumstance probably signifies a defect in physician training and ability to perform postabortion care. Physicians should be trained in postabortion care and laws should be changed in conjunction with greater drive to improve contraceptive utilization and reduce the incidence of unsafely induced abortion.

Adinma, J.I. and E. Adinma. "Karman's Cannula and Vacuum Aspirator in Gynaecological Practice." *Journal of the National Medical Association*, 88(1):22–4, January 1996 (Nnamdi Azikiwe University Teaching Hospital, Nnewi, Anambra State, Nigeria).

The charts of 340 patients who underwent an endometrial suction procedure using Karman's cannula and syringe were reviewed. The therapeutic uses of this instrument were for the treatment of chronic endometritis (18.6 percent), the evacuation of incomplete or missed abortion (14.6 percent) or hydatidiform mole (0.8 percent), and the retrieval of the missing tail of an intrauterine contraceptive device (1.2 percent). Its diagnostic indications include the investigation of infertility (55.3 percent), dysfunctional uterine bleeding (8.7 percent), and postcoital bleeding (0.8 percent). The diagnostic yield of the instrument was 96.6 percent. Transient postoperative abdominal pain occurred in 65.9 percent of the cases, while cervical dilation preceded aspiration in 12.9 percent of the cases with cervical stenosis.

The advantages of the instrument are discussed and its usefulness in everyday gynecologic practice is highlighted.

Akinyanju, O.O., R.F. Disu, J.A. Akinde, T.A. Adewole, A.I. Otaigbe, and E.E. Emuveyan. "Initiation of Prenatal Diagnosis of Sickle-Cell Disorders in Africa." *Prenatal Diagnosis*, 19(4):299–304, April 1999 (Department of Medicine, Lagos University Teaching Hospital, Nigeria).

Prenatal diagnosis of sickle cell disorders (SCD) in Nigeria was introduced in order to meet a rising demand. The approach and experience are documented as a guide to others in countries with similar problems. A cost-recovery fee, charged only to sustain the service, predictably limited access to it. Ultrasound-guided transcervical (TC) or transabdominal (TA) sampling of 124 chorionic villi was conducted from 9 weeks' gestation. All couples carried the sickle trait (AS) and 52 (51 percent) women had previously had children with sickle cell anemia. Seventy-two samples were obtained by the TA and 52 by TC. Seven percent miscarried after chorionic villus sampling (CVS), but the miscarriage rate was significantly higher ($p = 0.023$) after TC CVS (13.5 percent) than after TA CVS (2.8 percent) and also higher in the first 62 (11.3 percent) than after the last 62 CVS (3.2 percent). DNA analysis of CVS indicated Hb AA in 29 (23.4 percent), AS in 67 (54 percent), and SS in 23 (18.5 percent). No result was obtainable in five subjects for technical reasons. Ninety-six percent of the women with SS fetuses terminated the pregnancies. The need for a standby source of electricity where the supply is unreliable and the need for providing an equitable service to all couples at risk are highlighted.

Anate, M., O. Awoyemi, O. Oyawoye, and O. Petu. "Procured Abortion in Ilorin, Nigeria." *East African Medical Journal*, 72(6):386–90, June 1995 (Faculty of Health Sciences, University of Ilorin, Nigeria).

A prospective study of maternal mortality and morbidity and other related social problems among 144 cases of procured abortion in Ilorin, Nigeria, over a 24-month period is presented. A mortality rate of 90.3 per 1,000 procured abortions was recorded. Genital sepsis, hemorrhagic anemia, gut injury, uterine perforation, and vesicovaginal fistulae were encountered. Poor referral system, late presentation, poor blood transfusion services, and inadequate availability of drugs had adverse effects on the patients. The implications (the menace and frequency) of these and possible measures, such as improving the literacy level, the moral standards, contraceptive practice, and family life education (sex education) are discussed.

Anate, M. and O. Akeredolu. "Pregnancy Outcome in Elderly Primigravidae at University of Ilorin Teaching Hospital, Nigeria." *East African Medical Journal*, 73(8):548–51, August 1996 (University of Ilorin Teaching Hospital, Nigeria).

The outcome of pregnancy in 120 elderly primigravid patients (35 years and above) managed at the University of Ilorin Teaching Hospital, Ilorin, over a five-year period has been studied and compared with 140 randomly selected young primigravid patients (20–25 years) managed during the same period in the same center. All patients were Nigerians. There was no significant difference in the incidence of abortion, mean gestational age, preeclampsia/pregnancy-related hypertension, instrumental delivery, and mode of onset of labor in the two groups. There was a statistically significant difference between the two groups in the incidence of fetal malpresentation (elderly 5 percent, young 1.4 percent, $p < 0.001$), postpartum hemorrhage (elderly 1.7 percent, young 0.7 percent, $p < 0.001$), caesarean section (elderly 36.7 percent, young 6.9 percent, $p < 0.001$), fetal abnormality (elderly 1.7 percent, young 5.7 percent, $p < 0.001$), perinatal morbidity (elderly 26.7 percent,

young 12.9 percent, $p < 0.05$) and perinatal mortality (elderly 4.2 percent, young 1.4 percent, $p < 0.05$). The implications of these findings are discussed.

Anyanwu, S.N. "Fibro-Adenoma of the Breast in Nigerian Igbos." *South African Medical Journal*, 90(12):1223–6, December 2000 (Department of Surgery, Nnamdi Azikiwe University Teaching Hospital, Nnewi, Nigeria).

Background: There has been a recent increase in interest in conservative treatment of benign disease. **Objective:** To study the epidemiology, clinical features, and management of fibro-adenoma of the breast in Nigerian Igbos. **Patients and methods:** Patients with breast disease presenting to the author at four Nigerian hospitals between 1986 and 1997 were enrolled in a prospective study. **Results:** Patients with breast disease constituted a significant burden in general surgical practices, with fibro-adenoma present in 94 out of 284 patients with benign disease (33 percent), and 410 patients with breast disease (23 percent). The accuracy of clinical preoperative diagnosis is excellent, especially in those aged under 25 years. Conservative treatment may be advisable for these patients if they can be kept under observation. Other worrisome discoveries include a high rate of teenage abortion and a significant delay in seeking medical help that has not been reduced when compared with a previous study undertaken 30 years ago.

Archibong, E.I. "Illegal Induced Abortion—A Continuing Problem in Nigeria." *International Journal of Gynaecology and Obstetrics*, 34(3):261–5, March 1991 (Department of Obstetrics and Gynaecology, University of Calabar Teaching Hospital, Nigeria).

Illegal induced abortion is still a major contributing factor to maternal morbidity and mortality in Nigeria. It is very common among school girls who are still ignorant of contraception. A good percentage of the abortions are procured by nonmedically qualified personnel. The author has not only advocated the introduction of sex education into the school curriculum as a redeeming measure, but also the provision of contraception in schools and the liberalization of the abortion law.

Bobzom, D.N., M.A. Mai, G.O. Akpede, and C.M. Chama. "Paediatric and Teenage Gynaecological Disorders in Northern Nigeria." *Annals of Tropical Paediatrics*, 17(3):229–32, September 1997 (Department of Obstetrics and Gynaecology, University of Maiduguri Teaching Hospital, Nigeria).

A retrospective analysis of 206 pediatric and teenage gynecologic disorders seen at the University of Maiduguri Teaching Hospital from January 1984 to December 1993 is presented. The age range was from birth to 19 years, with 94 percent aged 12–19 years. Abortions constituted the most common gynecologic disorder seen (37.4 percent), followed by traumatic injury to the genitalia (30.6 percent). Other frequently seen disorders included ovarian cysts (4.9 percent), cryptomenorrhea (4.4 percent), labial agglutination (3 percent), ruptured ectopic pregnancy (3 percent), and hydatidiform mole (1.4 percent). Management was based on usual, standard gynecologic practice.

Brabin, L., G. Fazio-Tirrozzo, S. Shahid, O. Agbaje, S. Maxwell, R. Broadhead, N. Briggs, and B. Brabin. "Tetanus Antibody Levels Among Adolescent Girls in Developing Countries." *Transactions of the Royal Society of Tropical Medicine and Hygiene*, 94(4): 455–9, July–August 2000 (Department of Obstetrics and Gynaecology and Reproductive Health, St. Mary's Hospital, Manchester, UK).

Neonatal and maternal tetanus infections remain an important cause of death in many countries. Few studies have reported tetanus toxoid antibody levels of adolescent girls. As

part of the Expanded Programme on Immunization, most girls receive up to three injections in early childhood, and many subsequently do not receive booster vaccinations until they become pregnant. The authors determined (by ELISA) tetanus antibody seropositivity in adolescent girls from Malawi (in 1996), Nigeria (in 1993), and Pakistan (in 1996), and response to tetanus vaccination in adolescent girls from Pakistan. Geometric mean titres (GMT, IU/mL) were 0.94 in 117 Malawian, 0.32 in 154 Nigerian, and 1.08 in 162 Pakistani girls. In Nigeria, 54.7 percent of adolescents were seronegative, of whom 26.8 percent had a history of unsafe abortion. In Malawi and Pakistan, all girls were seropositive; in Pakistan, following a booster vaccination, titres increased threefold, with a lower response in older girls. The results indicated that adequate childhood immunization is likely to provide protective levels through adolescence. Booster vaccination in late childhood/early adolescence should protect the majority of women throughout their reproductive lives. This practice would reduce the risks of girls exposed to infection through unsafe abortions and may be the best option for countries seeking to improve their vaccination schedule, especially where tetanus vaccine coverage in pregnant women is unacceptably low.

Brabin, L., J. Kemp, O.K. Obunge, J. Ikimalo, N. Dollimore, N.N. Odu, C.A. Hart, and N.D. Briggs. "Reproductive Tract Infections and Abortion Among Adolescent Girls in Rural Nigeria." *Lancet*, 345(8945):300–4, February 4, 1995 (Liverpool School of Tropical Medicine, UK).

Few studies from developing countries have investigated reproductive tract infections or other indicators of sexual health among unmarried adolescent girls in rural areas. The authors obtained baseline demographic, clinical, and microbiological data on reproductive tract infections and induced abortion in girls in a rural area of southeast Nigeria, in order to assess the need for health care for adolescents. Eight hundred and sixty-eight females attended for interview and examination: 458 aged 20 and above, and 410 aged 12–19 (the latter representing 93.4 percent of the adolescent population). Forty-four percent of those under 17 and 80.1 percent aged 17–19 years were sexually active, and at least 24.1 percent had undergone an induced abortion; only 5.3 percent had ever used a modern contraceptive. Vaginal discharge was reported by 82.4 percent, though few sought treatment. Ninety-four percent of sexually active adolescents and 97.6 percent of sexually active women 20 years old or over were gynecologically examined and screened for reproductive tract infections. Of those under 17, 19.8 percent had symptomatic candida and 11.1 percent had trichomonas infections. Among those aged 17–19 years, chlamydia was detected in 10.5 percent, and symptomatic candidosis in 25.6 percent; this was the group most likely to have any infection (43.8 percent). Forty-two percent of sexually active adolescents had experienced either an abortion or an STD. Syphilis was the only infection for which the incidence clearly increased with age. Health care services for adolescents in this community are needed and should include sex education, contraceptive provision (especially barrier methods), and access to treatment for reproductive tract infections. Investments in health for this age group will have an effect on subsequent reproductive health.

Durosinmi, M.A., A.I. Odebiyi, I.A. Adediran, N.O. Akinola, D.E. Adegorioye, and M.A. Okunade. "Acceptability of Prenatal Diagnosis of Sickle Cell Anaemia (SCA) by Female Patients and Parents of SCA Patients in Nigeria." *Social Science and Medicine*, 41(3):433–6, August 1995 (Department of Haematology, Obafemi Awolowo University, Ile-Ife, Nigeria).

The acceptability of prenatal diagnosis (PND) of sickle cell anemia (SCA) as a means of controlling sickle cell disorder in Nigeria was examined using a structured questionnaire. The respondents were comprised of 92 adult female patients with SCA, aged 15–20 (23 +/- 6) years; 53 HbAS mothers, aged 20–61 (37 +/- 11) years, and 48 HbAS fathers, aged 33–65

(46 +/- 8) years. More than 85 percent of the respondents would like PND to be offered in Nigeria and 92 percent of the HbAS mothers as well as 86 percent of the fathers would like to have the investigation or allow their wives to go through the procedure, respectively. Only 35 percent of the patients compared with 63 percent of the mothers and 51 percent of the fathers would opt for termination of an affected pregnancy. Fear of the complications of abortion and religious convictions were the two most frequently cited reasons for opposing pregnancy termination. The high percentage of parents who would opt for termination of an affected pregnancy was associated with the societal emphasis on perfection and on previous experience in management of SCA patients. It is interesting that most of the respondents still favored effective genetic counseling as the best means of controlling SCA.

Durosinmi, M.A., A.I. Odebiyi, N.O. Akinola, L.A. Adediran, Y. Aken'Ova, M.A. Okunade, N.K. Halim, K.E. Onwukeme, P.O. Olatunji, and D.E. Adegoroye. "Acceptability of Prenatal Diagnosis of Sick Cell Anaemia by a Sample of the Nigerian Population." *African Journal of Medicine and Medical Science*, 26(1-2):55-8 (Department of Haematology and Immunology, Obafemi Awolowo University Teaching Hospital, Ile-Ife, Nigeria).

The acceptability of prenatal diagnosis (PND) as a means of controlling sickle cell anemia (SCA) in Nigeria was examined using a semistructured questionnaire. The aim of the study was to examine the attitudes of well-informed, educated Nigerians about the use of PND and abortion of confirmed HbSS pregnancies in the control of SCA. There were 433 respondents: 204 males and 210 females (gender was not recorded for 19 respondents). They were aged 15-50 (31 +/- 18) years. Forty percent had HbAA, 15 percent HbAS, 1.6 percent HbAC, 2 percent HbSS, and 0.2 percent HbSC; 153 (35 percent) had no knowledge of their hemoglobin electrophoretic pattern genotypes. The majority of the respondents (69.5 percent) appreciated the role of both parents in the transmission of the disease. Only 45 (18 percent) of the respondents heard of SCA for the first time through sickle cell counselors, 23 percent through the news media, 29 percent through friends and relations, 21 percent obtained the information through health workers, while 5 percent had never heard of sickle cell disease before the interview. As many as 192 (44 percent) of the respondents were aware that SCA could be diagnosed in pregnancy; 45 percent would opt for termination of the affected pregnancies. Avoidance of the problems associated with managing SCA children was the most important reason for approving pregnancy termination, whereas 73 percent of those rejecting pregnancy termination did so for religious and moral reasons. Seventy-eight percent of those interviewed would want PND started in Nigeria. The two approved control measures for SCA by most of the respondents were genetic counseling and PND; both should, therefore, be considered in implementing control measures for SCA in this country.

Emembolu, J. "The Obstetric Fistula: Factors Associated with Improved Pregnancy Outcome After a Successful Repair." *International Journal of Gynaecology and Obstetrics*, 39(3):205-12, Nov. 1992 (Department of Obstetrics and Gynaecology, A.B.U. Teaching Hospital, Zaria, Kaduna State, Nigeria).

A retrospective study of 155 pregnant patients with obstetric fistulae was conducted to determine the factors associated with improvement in the pregnancy outcome. The successful repair of the fistula was associated with a reduced abortion rate (4 percent), incidence of premature rupture of the membranes (1.3 percent) and perinatal mortality (13 percent) as well as an increase in the mean fetal birthweight and reduced incidence of low birth (20.3 percent). Antenatal supervision of pregnancy increased the acceptance rate for elective Caesarean section and was associated with early referral of cases to the hospital during labor. The patients having their first pregnancies since the onset of their fistulae

delayed longest in labor at home (15.6 hours) hence had the highest perinatal mortality and rate of recurrence of obstetric fistula. Therefore the successful repair of the obstetric fistula together with an aggressive drive to improve antenatal supervision especially directed at the younger patients will improve acceptance of the policy of elective Caesarean delivery and therefore the overall pregnancy outcome among these patients.

Emuveyan, E.E. "Profile of Abortion in Nigeria." *African Journal of Fertility, Sexuality and Reproductive Health*, 1(1):8–13, March 1996.

Henshaw, S.K., S. Singh, B.A. Oye-Adeniran, I.F. Adewole, N. Iwere, and Y.P. Cuca. "The Incidence of Induced Abortion in Nigeria." *International Family Planning Perspectives*, 24(4): 156–164, 1998.

Although abortion is illegal in Nigeria except to save the life of the woman, thousands of women resort to abortions each year. Information on the incidence of abortion and on the consequences of abortion outside the health care system is needed to develop policies and programs that will address the problem. Experienced physicians conducted interviews at a nationally representative sample of 672 health facilities in Nigeria that were considered to be potential providers of abortions or of treatment for abortion complications. The data were used to estimate the annual number of abortions and to describe the provision of abortion-related services. Each year, Nigerian women obtain approximately 610,000 abortions, a rate of 25 abortions per 1,000 women aged 15-44. The rate is much lower in the poor, rural regions of northern Nigeria than in the more economically developed southern regions. An estimated 40 percent of abortions are performed by physicians in established health facilities, while the rest are performed by nonphysician providers. Of the abortions performed by physicians, 87 percent take place in privately owned facilities and 73 percent are performed by nonspecialist general practitioners. Three fourths of physician providers use manual vacuum aspiration to perform abortions, and 51 percent of providers who treat abortion complications use this method. Physician respondents believe that the main methods used by nurses, midwives, and other nonphysicians to induce abortions are dilation and curettage, hormonal or synthetic drugs, and insertion of solid or sharp objects. Although highly restricted, abortions take place in large numbers in Nigeria, under both safe and unsafe conditions. Policies to improve access to contraceptive services would reduce unplanned pregnancy and abortion and, along with greater access to safe abortion, would help preserve the health and lives of Nigerian women.

Iloabachie, G.C. and H.E. Onah. "Cervico-Vaginal Fistula from Induced Abortions Causing Subsequent Spontaneous Midtrimester Abortions in Nigerians: Case Report." *Nigerian Postgraduate Medical Journal*, 9(2):62–4, June 2002 (Department of Obstetrics and Gynaecology, University of Nigeria Teaching Hospital, Enugu, Nigeria).

A report of three cases of cervico-vaginal fistula (CVF) from induced abortions causing subsequent spontaneous midtrimester abortions and a literature review is presented. Restrictive abortion laws, low contraceptive use, and increased sexual activity consequent upon adverse socioeconomic conditions have led to an increase in the prevalence of illegal abortions in Nigeria over the previous two decades. CVF appears to be an emerging complication of such abortions. Cervical cerclage is preferred to trachelorrhaphy in the management of such cases. However, where vaginally performed cerclage does not succeed, the abdominal route should be used as a last resort. After a previous induced abortion, clinicians managing the subsequent pregnancy need to search carefully for cervico-vaginal fistula, which may compromise that particular pregnancy. Appropriate contraceptive use and

safe abortions using modern methods in cases of contraceptive failure will prevent such horrendous complications of induced abortions in Nigeria and other developing countries.

Konje, J.C. and K.A. Obisesan. "Septic Abortion at University College Hospital, Ibadan, Nigeria." *International Journal of Gynaecology and Obstetrics*, 36(2):121–5, October 1991 (Department of Obstetrics and Gynaecology, University College Hospital, Ibadan, Nigeria).

One hundred and forty-three cases of septic abortion managed over five years are reviewed. Sepsis was more common after induced abortion, which is often performed by nongynecologists. Instrumentation was commonly performed in the homes, chemist facilities, and poorly equipped private clinics. Complications were generally severe and maternal mortality was 8.4 percent. Treatment was individualized but there was no standard antimicrobial regime.

Konje, J.C., K.A. Obisesan, and O.A. Ladipo. "Health and Economic Consequences of Septic Induced Abortion." *International Journal of Gynaecology and Obstetrics*, 37(3):193–7, March 1992 (Department of Obstetrics and Gynaecology, University College Hospital, Ibadan, Nigeria).

Over a period of seven years, 230 cases of illegally induced abortions complicated by sepsis were treated at the University College Hospital, Ibadan, Nigeria. The number of terminations complicated by sepsis doubled from 25.4 (between 1981 and 1985) to 51.0 (between 1986 and 1987) cases per year. Peritonitis was the most common associated complication, while maternal mortality was 8.3 percent. The average cost of treatment was US \$223, while the average monthly earnings were US \$45. Legalization of abortion would have resulted in a saving of US \$50,022. The provision of legal abortion would reduce the incidence of sepsis after termination, while reproductive health education, information dissemination, and the provision of easily accessible family planning services would greatly reduce the number of unwanted pregnancies.

Makinwa-Adebusoye, P., S. Singh, and S. Audarn. "Nigerian Health Professionals—Perceptions About Abortion Practice." *International Family Planning Perspectives*, 23(4): 155–161, 1997.

Although the provision of abortion is highly restricted in Nigeria, findings from a 1996 survey of 67 health professionals from two thirds of the country's states indicate that women of all socioeconomic levels obtain induced abortions, albeit under a wide range of conditions. Nationally, about one third of women seeking an abortion are thought to obtain it from a physician, and almost one fourth are believed to go to a nurse or midwife; nearly half are thought to either use traditional providers who have no formal medical training, take drugs they purchase over the counter, or employ other means to induce the abortion themselves. Because such a high proportion of abortions are likely to be performed by unskilled providers or are self-induced, about two fifths of all women who have an abortion are believed to suffer a medical complication, and nearly one fifth are expected to be hospitalized for treatment of health consequences. Urban women and those who are relatively well-off are more likely than their rural and poor counterparts to have access to safe abortion services and hospital treatment for medical complications.

Megafu, U. and B.C. Ozumba. "Morbidity and Mortality from Induced Illegal Abortion at the University of Nigeria Teaching Hospital, Enugu: A Five Year Review." *International Journal of Gynaecology and Obstetrics*. 34(2):163–7, February 1991 (Department of Obstetrics and Gynaecology, College of Medicine, University of Nigeria Teaching Hospital, Enugu).

Eighty-four cases of illegally induced abortion presented at the University of Nigeria Teaching Hospital (1982–1986), or 4 per 1,000 deliveries. Seventy-one percent of the patients were 20 years or younger and 8 out of 10 were nulliparous. Medical practitioners were responsible for one third of the cases. Presentation and treatment are described. Fifteen women died (179 per 1,000 cases). The true number of deaths from abortion in the community is probably higher.

Ntia, I.O. and B.A. Ekele. “Bowel Prolapse Through Perforated Uterus Following Induced Abortion.” *West African Journal of Medicine*, 19(3):209–11, July–September 2000 (Department of Obstetric and Gynaecology, UDUTH, Sokoto).

Between 1991 and 1998, there were nine cases of uterine perforation following induced abortion with prolapse of the bowel out of the introitus, managed at Usmanu Danfodiyo University Teaching Hospital, Sokoto. Nonphysicians caused the injury in six cases. The interval between instrumentation and presentation ranged from 5 to 14 days. In all the cases, there was already necrosis of the involved bowel. The ileum was the most commonly involved bowel (6 cases, 67 percent), while the uterine injury was on the fundus most of the time (7 cases, 78 percent). Resection and anastomosis with uterine repair was the surgical procedure in all the cases. There were three cases of anastomotic leakage but no mortality. The authors encounter major complications of induced abortion in their center. Apart from preventive measures against unwanted pregnancies, access to safe abortions by trained personnel might minimize this type of complication.

Nzeh, D.A. and O.O. Adetoro. “Sonographic Assessment of the Incompetent Cervix in Pregnancy.” *International Journal of Gynaecology and Obstetrics*, 37(3):179–84, March 1992 (Department of Radiology, University of Ilorin, Nigeria).

Ultrasonography was performed in 40 women with a history of recurrent midtrimester abortion. The results were compared with those of a control group, consisting of 53 women with no previous history of abortion and who had at least one full term pregnancy with normal vaginal delivery. Mean internal cervical os diameters of 16.0 mm and 22.5 mm at 10 and 27 weeks gestation, respectively, were recorded in the cervical incompetent patients, while mean values of 7.7 mm and 14.5 mm at 13 and 28 weeks gestation were observed in the normal control subjects. Full analysis of covariance showed statistically significant difference in the internal os diameter between the control group and the cervical incompetence cases ($t_{90} = 9.33$, $p < 0.001$).

Odujinrin, O.M. “Sexual Activity, Contraceptive Practice and Abortion Among Adolescents in Lagos, Nigeria.” *International Journal of Gynaecology and Obstetrics*, 34(4):361–6, April 1991 (Department of Community Health, College of Medicine, University of Lagos, Nigeria).

Nine hundred and fifty randomly selected secondary school girls were surveyed. Sexual activity was claimed by 29 percent; the youngest age was 12 years; age had no influence on the frequency of sexual intercourse. Multiple sexual partners, a high risk behavior for contracting STDs, including AIDS, was demonstrated in 33.7 percent, and only 20.3 percent used orthodox methods of contraception. Induced abortion was procured by 23.5 percent, and most were procured from unskilled personnel and by dangerous methods.

Ogedengbe, O.K. and O. Akinyanju. “The Pattern of Sickle Cell Disease in Pregnancy in Lagos, Nigeria.” *West African Journal of Medicine*, 12(2):96–100, April–June 1993 (Department of Obstetrics and Gynaecology, College of Medicine, University of Lagos, Nigeria).

The outcome of pregnancy and labor in patients with sickle cell disease delivered at the Lagos University Teaching Hospital under one obstetrician between January 1, 1985, and December 31, 1989, is analyzed. There were 31 pregnancies in 28 patients with sickle cell anemia (HbSS) and 10 pregnancies in 7 patients with sickle cell hemoglobin C disease (HbSC). Six pregnancies in HbSS patients and two in HbSC were in patients who had not had specialized preconceptual care. There was one abortion in a patient with HbSC and one pair of twins in a patient with HbSS. The complication rate was high in HbSC patients compared with a previous series but not as high as in patients with HbSS. The perinatal mortality rates were 233 and 111 per 1,000 deliveries in HbSS and HbSC patients, respectively. The maternal mortality rates were 129 and 111 per 1,000 deliveries in HbSS and HbSC patients, respectively. Two of the maternal deaths and four of the perinatal deaths occurred in HbSS patients who had had no preconceptual specialist care, versus those receiving specialist treatment. In the case of perinatal mortality, this was found to be statistically significant ($p < 0.001$).

Ogunniyi, S.O., O.O. Makinde, and F.O. Dare. "Abortion-Related Deaths in Ile-Ife, Nigeria: a 12-year Review." *African Journal of Medicine and Medical Science*, 19(4):271–4, December 1990 (Department of Obstetrics, Gynaecology and Perinatology, Faculty of Health Sciences, Obafemi Awolowo University, Ile-Ife, Nigeria).

Cases of death due to abortion at the Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Nigeria, between January 1977 and September 1988 were reviewed. Abortion accounted for 12.5 percent of the maternal deaths, with the majority (88.9 percent) from illegal abortions. The majority (92.6 percent) of the patients were of low educational status. Both married women and single girls were involved. Instrumentation was employed in 81.5 percent of the abortions and unqualified personnel were involved in 74.1 percent of cases of such intervention. Seventeen (63 percent) of the pregnancies were terminated within the first trimester. Most (96.3 percent) of the patients were admitted in poor clinical state, and 51.8 percent of them died within 48 hours of admission. Sepsis was the most common cause of death.

Okonofua, F.E., U. Onwudiegwu, and R. Odutayo. "Pregnancy Outcome After Illegal Induced Abortion in Nigeria: A Retrospective Controlled Historical Study." *African Journal of Medicine and Medical Science*, 23(2):165–9, June 1994 (Department of Obstetrics, Gynaecology and Perinatology, Faculty of Health Sciences, Obafemi Awolowo University, Ile-Ife, Nigeria).

The effect of illegal abortion on subsequent reproduction was studied in 46 Nigerian women who gave a history of illegal termination of pregnancy. There was a statistically significant increase in the incidences of premature rupture of membranes, premature labor, and low birthweight when compared with 53 primigravida who gave no such history of abortion. The perinatal mortality was also significantly higher in the abortion group. In contrast, preeclampsia was less common in the abortion group. These findings indicate that illegal abortion has adverse effects on pregnancy outcome in Nigerian women.

Okonofua, F.E., U. Onwudiegwu, and O.A. Odunsi. "Illegal Induced Abortion: A Study of 74 Cases in Ile-Ife, Nigeria." *Tropical Doctor*, 22(2):75–8, April 1992 (Department of Obstetrics, Gynaecology and Perinatology, Obafemi Awolowo University, Ile-Ife, Nigeria.)

Seventy-four women with complications of induced abortion were studied prospectively at the Obafemi Awolowo University, Nigeria. Twenty of the women were interviewed privately to elicit confidential information and also to determine their attitudes toward contraception and to the Nigerian national abortion law. The results showed that

abortion is prevalent in all classes of women and in married as well as unmarried women. There were 13 maternal deaths, accounting for 35 percent of the maternal mortality in the hospital during the period. Sepsis was the most common cause of death; most of the abortions complicated by sepsis had been performed by medical practitioners. Interviews with the women revealed that most of them had knowledge of contraception but were unwilling to use it because of incorrect information. Most women did not know that abortion is illegal in Nigeria, but felt that it should be. Measures that could be of value in reducing abortion-associated maternal mortality in Nigeria include training and retraining of physicians in the management of abortion and abortion complications, family planning education of all fertile women, provision of confidential family planning services, and liberalization of the abortion law.

Okonofua, F.E., C. Odimegwu, H. Ajabor, P.H. Daru, and A. Johnson. "Assessing the Prevalence and Determinants of Unwanted Pregnancy and Induced Abortion in Nigeria." *Studies in Family Planning*, 30(1):67–77, March 1999 (Women's Health and Action Research Centre, Benin City, Edo State, Nigeria).

This study was conducted to determine the prevalence and sociodemographic determinants of unwanted pregnancy and induced abortion in the Jos and Ife LGAs of Nigeria. A total of 1,516 randomly selected women aged 15–45 responded to a pretested structured questionnaire designed to elicit information concerning previous unwanted pregnancies and induced abortions in a value-free manner. Nearly 20 percent of the women reported having had an unwanted pregnancy. Of these, 58 percent reported that they had successfully terminated the pregnancies, 32 percent continued the pregnancies, and nearly 9 percent stated that they had attempted termination but failed. Overall, the prevalence of self-reports of induced abortion was 11 percent. The results reveal that information can be obtained on abortion in areas with restrictive abortion policies if an indirect interviewing approach is used.

Okonofua, F. "Preventing Unsafe Abortion in Nigeria." *African Journal of Reproductive Health*, 1(1):25–36, March 1997 (University of Benin, Nigeria.)

This paper reviews pertinent literature and identifies research needs relating to unsafe abortion in Nigeria. The paper is organized into three sections. In the first part of the article, a conceptual framework for developing a research agenda to prevent unsafe abortion among Nigerian women is articulated. This section argues for a systematic research agenda that would allow a fuller understanding of the determinants of all segments of the induced abortion cycle. In the second section of the article, the authors offer a detailed description of the available research data, as well as gaps in knowledge on unsafe abortion in Nigeria. In the final part of the paper, recommendations are made on priority areas of research that are capable of stemming the high rate of morbidity and mortality from unsafe abortion among Nigerian women. In particular, the paper recommends high quality, multidisciplinary formative and intervention research to foster an understanding of the determinants of abortion among Nigerian women. Such research should be geared toward providing accurate information to policymakers in a logical manner to enable them to generate appropriate policies for preventing unsafe abortion.

Osinusi, B.O. and J.A. Adeleye. "Homozygous Sickle Cell Anemia at the University College Hospital, Ibadan, Revisited." *International Journal of Gynaecology and Obstetrics*, 30(1):51–5, September 1989 (Department of Obstetrics and Gynaecology, University College Hospital, Ibadan, Nigeria).

The outcome of 78 pregnancies in 47 patients with homozygous sickle cell anemia managed at the University College Hospital, Ibadan, between January 1, 1975, and December 31, 1984, is reviewed. There were two maternal deaths, giving a maternal mortality rate of 25 per 1,000. Abortion rate was 155 per 1,000. The overall perinatal mortality rate was 188 per 1,000. Forty-five percent of the babies were of low birthweight and 29 percent were preterm. Anemia was the most common antenatal complication and the highest indication for hospitalization. The data were compared with previous data from this hospital and with similar reports by other investigators outside Nigeria. A need for meticulous antenatal care and prenatal diagnosis to eliminate the homozygous sickle cell anemia is stressed.

Renne, E.P. "The Pregnancy That Doesn't Stay: The Practice and Perception of Abortion by Ekiti Yoruba Women." *Social Science and Medicine*, 42(4):483–94, February 1996 (Princeton University, NJ 08544–2091, USA).

Ekiti Yoruba village women in southwest Nigeria make use of traditional and patent medicines as abortifacients as well as dilation and curettage abortions performed in urban centers to terminate unwanted pregnancies. This paper examines present day abortion practices and attitudes and relates them to traditional beliefs about conception, fetal development, and infertility. These beliefs, along with factors of economy and access, help to explain the continued use of abortion as a form of birth control, despite the presence of other options. The paper concludes with a discussion of the current debate about legalizing abortion in Nigeria and a recommendation consonant with everyday village practice.

Temisanren, E. "Views of Women in Yoruba Culture and Their Impact on the Abortion Decision." *Women's Health*, 22(3):1–8, 1995.

Ujah, I.A. "Sexual Activity and Attitudes Toward Contraception Among Women Seeking Termination of Pregnancy in Zaria, Northern Nigeria." *International Journal of Gynaecology and Obstetrics*, 35(1):73–7, May 1991 (Department of Obstetrics and Gynaecology, University of Jos, Plateau State, Nigeria).

One hundred and eight women seeking termination of pregnancy in Zaria were studied during a period of 3 months (October to December 1985). The mean age was 21.8 years (range 15–38); 35.6 percent were below the age of 20 years and 57 percent were students. The three major tribes engage in illegal termination of pregnancy, with Yorubas in the majority; 53.3 percent had a history of previous induced abortion. Sixty-three percent had had sexual experience by the age of 18 years. The major reasons for seeking termination of pregnancy were "still in school" and "not married." Although 88.8 percent had knowledge of contraception, less than half actually used any method. Of the 60 patients who volunteered information on their views on legalization of abortion, 21 (35 percent) were against legalization of abortion for various reasons. Family health education in schools and contraceptive counseling among the adolescents will reduce the prevalence of illegal abortions and its disastrous consequences.

Female Genital Cutting and Circumcision

Larsen, U. and F.E. Okonofua. "Female Circumcision and Obstetric Complications." *International Journal of Gynaecology and Obstetrics*, 77(3):255–65, June 2002 (Department of Population and International Health, Harvard School of Public Health, Boston, MA, USA, ularsen@hsph.harvard.edu).

Objectives: To examine whether complications at delivery are associated with female circumcision. **Method:** 1,851 women seeking family planning or antenatal care in three southwest Nigerian hospitals were interviewed and had a medical examination. The prevalence of complications at delivery for uncircumcised women and circumcised women with type 1 (partial or total removal of the clitoris) or type 2 (partial or total removal of the clitoris and part or all of the labia minora) was determined. Associations between self-reported complications at delivery and clinic-reported type of circumcision were analyzed using bivariate and multivariate logistic regression. **Result:** Forty-five percent were circumcised; 71 percent had type 1 and 24 percent had type 2. Circumcised women had significantly higher risks of tearing and stillbirths when all pregnancies were analyzed. **Conclusion:** Circumcised women experienced more obstetric complications, while there was no significant difference between women with type 1 and type 2.

Nkwo, P.O. and H.E. Onah. "Decrease in Female Genital Mutilation Among Nigerian Ibo Girls." *International Journal of Gynaecology and Obstetrics*, 75:321–2, 2001.

Female genital mutilation (FGM) is a long-established practice in many parts of the world. Among the Nigerian Ibos, childhood FGM is aimed at protecting the female from promiscuity while the adulthood type is usually a part of the marriage ceremony. A prospective observational study was conducted on 1,000 consecutive Ibo females seen at the obstetrics and gynecology unit of the University of Nigeria Teaching Hospital in Enugu. Of the 1,000 women examined, 354 were circumcised (35.4 percent). The circumcision rates were 83.3 percent, 59.1 percent, 39.3 percent, 29.7 percent, and 21.7 percent for the following birth cohorts: 1956–60, 1961–65, 1966–70, 1971–75, 1976–80 and 1981–85, respectively. Three hundred and eighteen (89.8 percent) of the 354 circumcised women had clitoridectomy in addition to excision of the labia minora, while the remaining 36 (10.2 percent) women had clitoridectomy alone. Overall prevalence of FGM (35.4 percent) in this study is much lower than the national average of 50–60 percent and the 68 percent recorded in a previous study 20 years earlier in the same hospital. Two factors are likely to be responsible for this trend: 1) the weak sociocultural basis of the practice in most parts of Iboland, and 2) the rising rate of formal education among female Ibos. In conclusion, FGM is a dying practice among the population, implicating a healthy development among Nigerian Ibos.

Odimegwu, C.O. and C.N. Okemgbo. "Female Circumcision and Sexual Activity: 'Any Relationship.'" *Unilag Sociological Review*, 1:159–76, July 2000.

This paper examines the relationship between female circumcision and sexual activity of a group of teenage girls in the Abakaliki area of Ebonyi State, Nigeria. A survey on the female child status conducted in 1997 is analyzed. The analysis shows that there is a high level of awareness of female circumcision and a majority of the girls have been circumcised. About one third of the girls have initiated sexual activity. The paper shows that circumcised girls are 20 percent less likely to have initiated sex than the uncircumcised—an indication that the difference in sexual initiation between the circumcised and uncircumcised is minimal. The result also shows that the circumcised girls are 1.8 times more likely to have initiated sex before age 15. This is accountable by the incidence of early marriage and not the circumcision status. The paper concludes that although the overall picture of this relationship will not be clear because of the paucity of questions asked to measure sexual activity, there is a need for social and medical science researchers to explore this relationship, using as proxies indicators of current sexual behavior. Until then, this analysis remains a working paper to challenge researchers.

Slanger, T.E., R.C. Snow, and F.E. Okonofua. "The Impact of Female Genital Cutting on First Delivery in Southwest Nigeria." *Studies in Family Planning*, 33(2):173–84, June 2002 (University of Heidelberg, Department of Tropical Hygiene and Public Health, Germany, tracy.slanger@urz.uni-heidelberg.de).

To date, data linking obstetric morbidity to female genital cutting in populations with less severe types of cutting have been limited to case reports and speculation. In this cross-sectional study, 1,107 women at three hospitals in Edo State, Nigeria, reported on their first-delivery experiences. Fifty-six percent of the sample had undergone genital cutting. Although univariate analyses suggest that genital cutting is associated with delivery complications and procedures, multivariate analyses controlling for sociodemographic factors and delivery setting show no difference between cut and noncut women's likelihood of reporting first-delivery complications or procedures. Whereas a clinical association between genital cutting and obstetric morbidity may occur in populations that have undergone more severe forms of cutting, in this setting, apparent associations between cutting and obstetric morbidity appear to reflect confounding by social class and by the conditions under which delivery takes place.

Snow, R.C., T.E. Slanger, F.E. Okonofua, F. Oronsaye, and J. Wacker. "Female Genital Cutting in Southern Urban and Peri-Urban Nigeria: Self-Reported Validity, Social Determinants and Secular Decline." *Tropical Medicine and International Health*, 7(1):91–100, January 2002 (Department of Tropical Hygiene and Public Health, University of Heidelberg, Germany. rachel.snow@urz.uni-heidelberg.de)

Despite growing public resistance to the practice of female genital cutting (FGC), documentation of its prevalence, social correlates, or trends in practice are extremely limited, and most available data are based on self-reporting. In three antenatal and three family planning clinics in Southwest Nigeria, the authors studied the prevalence, social determinants, and validity of self-reporting for FGC among 1,709 women. Women were interviewed on social and demographic history and on whether or not they had undergone FGC. Interviews were followed by clinical examination to affirm the occurrence and extent of circumcision. In total, 45.9 percent had undergone some form of cutting. Based on WHO classifications by type, 32.6 percent had type 1 cuts, 11.5 percent had type 2, and 1.9 percent had type 3 or 4. Self-reported FGC status was valid in 79 percent of women; 14 percent were unsure of their status, and 7 percent reported their status incorrectly. Women are more likely to be unsure of their status if they were not cut, or come from social groups with a lower prevalence of cutting. Ethnicity was the most significant social predictor of FGC, followed by age, religious affiliation, and education. Prevalence of FGC was highest among the Bini and Urhobo, among those with the least education, and was particularly high among adherents to Pentecostal churches; this was independent of related social factors. There is evidence of a steady and steep secular decline in the prevalence of FGC in this region over the past 25 years, with age-specific prevalence rates of 75.4 percent among women aged 45–49 years, 48.6 percent among 30–34-year olds, and 14.5 percent among girls aged 15–19. Despite wide disparities in FGC prevalence across ethnic, religious, and educational groups, the secular decline is evident among all social subgroups.

V. GENDER ISSUES

Aire, J.E. "Romance as a Factor in Marital Satisfaction and the Nigerian Family at the Turn of a Millennium." *Nigerian School Health Journal*, 12(1–2):83–6, 2002.

Marital relationship is an area of life which has significant implications for the overall psychological well-being of a family. This most intimate aspect of human relationships often brings together persons of different inner needs and personalities. Thus, it is often rife with conflicts and general dissatisfaction, which results in poor marital adjustment. Carried forward, this causes a breakdown in the building blocks of the larger society—the family unit. The purpose of this paper, therefore, is to evaluate the effect of videotape therapy in highlighting romance as a factor in ameliorating ailing relationships in Nigerian families as they enter a new millennium. The sample for this study was taken from a random selection of 120 subjects; all were married individuals living with their spouses in the Ibadan metropolis. They were relatively well-educated, with an age range of 20–70 years, who had scored low in the modified marital bliss scale administered to them. These were randomly distributed into experimental groups A1, A2, and a control group, A3. The result of this study was an analysis of covariance. Some alternative statistical tools were also used to confirm the obtained result. The result obtained indicated that the treated subjects achieved better marital relationship than those in the control group with no treatment. The discussions, findings, recommendations, and conclusion were all presented.

Ene-Obong, H.N., G.I. Enugu, and A.C. Uwaegbute. "Determinants of Health and Nutritional Status of Rural Nigerian Women." *Journal of Health, Population and Nutrition*, 19(4):320–30, December 2001.

This study was undertaken to determine the effects of socioeconomic and cultural factors on the health and nutritional status of 300 women of childbearing age in two rural farming communities in Enugu State, Nigeria. The women were engaged in farming, trading, and teaching. A cross-sectional survey was conducted using both qualitative and quantitative data collection methods. The study involved focus group discussions, interviews using a questionnaire, measurement of food/nutrient intake, assessment of activity patterns, anthropometry, and observations of clinical signs of malnutrition. The better educated women had higher incomes than those with little or no education. Poor education was mainly attributed to lack of monetary support by parents (34 percent), marriage while in school (27 percent), and sex discrimination (21 percent). The teachers had significantly ($p < 0.05$) better health status, health and nutrition knowledge, food habits, nutrient intake, and self-concept, and adhered less to detrimental cultural practices. However, none of the women met their iron, riboflavin, and niacin requirements. More cases of chronic energy deficiency were observed among the farmers (16 percent) and traders (13 percent) than among the teachers (5 percent). Generally, the women worked long hours with reported working hours (6–7 hours) being lower than the observed working hours (11 hours) for the traders and teachers. Income had a significant ($p < 0.05$) positive correlation with all nutritional variables, except vitamin C, age-at-marriage ($r = 0.719$), and nutrition knowledge ($r = 0.601$). Age-at-marriage had a positive correlation with body mass index and all nutritional variables but was significant ($p < 0.05$) for protein ($r = 0.362$), calcium ($r = 0.358$), iron ($r = 0.362$), riboflavin ($r = 0.364$), and vitamin C ($r = 0.476$). Workload was negatively correlated with protein intake ($r = 0.346$, $p < 0.05$). Meal frequencies for more than 70 percent of the farmers and petty traders and 42 percent of the teachers were dependent on the availability of food in the household. Food taboos had no effect on their nutrient intake, since only 5–11 percent of women adhered to taboos. Although most women gave their children and husbands preference in

food distribution, not much difference was found in the amount of food consumed by these women. The ratio of wife's portion to husband's was 1:1.4 for the farmers, 1:1.3 for the traders, and 1:1.2 for the teachers. Focus group discussions revealed that sex discrimination in education prevailed where resources were limited. The results of the study suggest that the basic determinants of health and nutritional status of women are socioeconomic and cultural, with education having a mediating or modifying influence on cultural practices.

Feyisetan, B.J. "Spousal Communication and Contraceptive Use Among the Yoruba of Nigeria." *Population Research Policy Review*, 19(1):29–45, February 2000.

The present study examines the level of spousal communication and its impact on contraceptive use among Yoruba couples in southwest Nigeria. Data for the study were obtained from a survey on the role of men in family planning conducted in one of the states inhabited by the Yoruba of Nigeria, Ondo. The sample for this study consists of 381 monogamously married couples. Multivariate analyses were used to determine the impact of background variables on dependent variables. The study shows that fairly high percentages of men and women perceive that decisions on reproductive issues are taken jointly by both partners. The significantly high proportion of women who perceived that they participate in decision-making is particularly worth noting and is an indication that women's voices are heard in the study society. Although the impact decreases upon controlling for other variables, spousal communication was found to affect contraceptive use; contraceptive use is higher among marital partners who discuss and make joint decisions on contraception. The study also reveals that family planning counseling has a significant impact on contraceptive use.

NGO Networks for Health, Women's NGO Networks in Nigeria. *Providing Reproductive Health Information and Services; Promoting Reproductive Rights* (publication made possible through support by the Bureau for Global Health, Center for Population, Health and Nutrition, and the Bureau for Africa/Office of Sustainable Development, United States Agency for International Development under the terms of Grant No. HRN-A-00-98-00011-00).

Community-based organizations formed by women to collectively meet their responsibilities to children and family comprise a solid base of civil society and have evolved into complex networks responding to a range of challenges, including those in the reproductive health sector. Over the years, these women's networks have played a significant role in Nigeria and are the subject of this study. Research conducted in the four geographic regions of Nigeria examined 51 networks of women's NGOs involved in the delivery of reproductive health information and services and the promotion of reproductive rights. These networks have contributed immeasurably to the well-being of their members and the communities they serve. Over the years, women's NGO networks have filled a vital role by providing a range of reproductive health information and services to underserved communities. Women's NGO networks have grown and evolved during a time of great political upheaval and reorganization in Nigeria. Much of the information documented in this study may be instructive to others who are considering or already operating their own networks in other countries. Key lessons that have emerged include: 1) Nigerian women's networks are effective mechanisms for delivering reproductive health services and information and expanding reproductive rights; 2) the most effective and sustainable women's networks were created by NGOs and community-based organizations to address specific, identified problems and functioned for some time in an informal fashion before formalizing their operations; 3) integrating reproductive health activities into programs implemented by women's networks is an effective strategy to increase women's access to

reproductive health information and services; 4) integrating reproductive health efforts into the other work of women's networks helps to ensure the development and delivery of culturally appropriate information and services; 5) through their social mobilization and advocacy efforts, women's networks have been effective in neutralizing some of the traditional resistance to family planning programs encountered in pronatalist communities or from religious leaders; 6) a strong NGO sector is one of the best ways to ensure that individual women's networks are effective in delivering reproductive health services and promoting reproductive and political rights; 7) women's network members, known in their communities, provide a trusted primary source of traditional and modern reproductive health information and services; and 8) the absence of alternative organized groups with the capacity to meet the economic, social, and health needs of a significant number of women in Nigeria set the stage for women's networks to evolve.

Orubuloye, I.O., F. Oguntimehin, and T. Sadiq. "Women's Roles in Reproductive Health Decision-Making and Vulnerability to STD and HIV/AIDS in Ekiti, Nigeria." *Health Transition Review*, 7(Suppl):329–36, 1997(Department of Sociology, Ondo State University, Ado-Ekiti, Nigeria).

An exploratory study of women's roles in reproductive decision-making in Ekiti shows that women in the state are increasingly taking active decisions on matters affecting their daily lives. More women than ever before believed that they could make decisions on family size, when to have a baby, and choice of spacing period. The cultural barrier against short postpartum abstinence appeared to have diminished, and sex during lactation was not considered a major cultural and religious taboo. Knowledge of contraception has become universal in recent years, and the majority of women make decisions on the method and timing of family planning. All women who used family planning considered their decision in this regard very important. The ability of women to make decisions on these issues may not only enhance their bargaining power but also reduce their vulnerability to STDs, including AIDS, from diseased or high-risk partners.

Osagbemi, M.O. and A.A. Adepetu. "Gender Differences in the Reasons for Participation in Spouse Sharing Among the Okun in Nigeria." *African Journal of Reproductive Health/Revue Africaine de la Santé Reproductive*.

This report examines the reasons for participation in spouse sharing among the Okun with a view to identifying some factors that may present particular obstacles to women and enhance their vulnerability to the practice. A total of 1,029 sexually active respondents in five settlements where spouse sharing is being practiced participated in the questionnaire survey aspect of the study, while 82 respondents participated in the focus group discussions. About 65 percent of respondents reported having *ale* or *alase* and were involved in the practice of spouse sharing. Reasons for involvement in spouse sharing include the need for economic support, sexual satisfaction, increased social status, procreation, the problems of separation/divorce, and widowhood. The focus group discussions revealed a possible exploitation of the gender-based economic weakness of the women by the men in the initiation and sustenance of the practice in the Okun communities. It is recommended that for any program to achieve a considerable reduction in the practice, differences in the reasons for participation in spouse sharing among the men and women must be documented with a view toward solving those problems that compel women to participate.

Renne, E.P. "Gender Ideology and Fertility Strategies in an Ekiti Yoruba Village." *Studies in Family Planning*, 24(6, Pt. 1):343–53, November–December 1993 (Health Transition Centre, Australian National University, Canberra, ACT).

This article investigates the influence of gender ideology on number of children wanted, son preference, family-size discussions and decision-making, and use of birth control in a rural Ekiti Yoruba village in southwestern Nigeria. Interview and survey data indicate that attitudes about these matters vary more with age than with sex, suggesting that both women and men subscribe to the prevailing gender ideology of male authority in matters of family size and composition. However, women and men differ about who decides family size, largely because the ideal of fathers' financial support of their children is sometimes belied by practice. The article concludes with a discussion of the strategies that husbands and wives employ to obtain their reproductive goals and their implications for family planning programs in Nigeria.

Smith, D.J. "Romance, Parenthood, and Gender in a Modern African Society." *Ethnology*, 40(2):129–51, Spring 2001.

Young Igbo men and women in Nigeria increasingly insist on choosing their marriage partners, and ideas about love are shaping Igbo constructions of marriage. But the viability of marriage still depends on fertility. This article examines the divergent consequences for men and women as they negotiate the transition from the role of romantic lover that now commonly characterizes courtship to the roles of mother and father, embedded in webs of kinship, that characterize marriage.

Yahaya, M.K. "Analysis of Women's Reproductive Health Situation in Bida Emirate of Niger State, Nigeria." *African Journal of Reproductive Health/Revue Africaine de la Santé Reproductive*. 6(1):50–64, April 2002.

This study examined the reproductive health (RH) situation in Bida Emirate of Nigeria, with a view toward advancing frontiers in communication support for RH education. Multistage sampling technique was used to randomly select 1,200 women respondents that participated in the study. Data were obtained on RH and reproductive rights, RH history, and personal and social characteristics of respondents. Data analyses showed that the majority (68.1 percent) of respondents were aware of existing methods of birth control, while 31.9 percent were not. On the use of methods, abstinence, breastfeeding, and use of condoms recorded 42.8 percent, 22 percent, and 40.3 percent, respectively. Respondents rarely used traditional methods of birth control. Forty-five percent blamed their husbands for not using family planning (FP) methods. Surprisingly, 84.8 percent of the respondents had no idea of all the issues involved with HIV/AIDS; only 13 percent could describe gonorrhea and 3.1 percent could describe AIDS. Results further revealed that there is no significant relationship between personal and social characteristics of respondents (such as religion, marital status, and position) and their attitude towards FP. However, rural and urban women significantly differed in their health status ($t = 0.2729$, $p < 0.001$). A similar trend was observed for attitude towards family decision-making ($t = 40$, $p < 0.001$), sexuality and STD prevention ($t = 90$, $p < 0.001$), and maternity/child care ($t = 0.001$, $p < 0.001$). In conclusion, the study reveals that there is a wide gap between social expectations of women's RH and cultural realities in Nupeland of Nigeria. Among other recommendations the study thus recommends the need for a sustainable safe motherhood campaign in culture-bound societies.

VI. REPRODUCTIVE HEALTH AND DISEASE

Adewole, I.F., L.C. Edozien, I.A. Babarinsa, and E.E. Akang. "Invasive and In Situ Carcinoma of the Cervix in Young Nigerians: A Clinico-Pathologic Study of 27 Cases." *African Journal of Medicine and Medical Sciences*. 26(3-4):191-3, September-December 1997 (Department of Obstetrics and Gynaecology and Pathology, College of Medicine, University College Hospital, Ibadan, Nigeria).

A study of young Nigerians, aged 30 and under, with invasive and in-situ cervical carcinoma, confirms the notion that cervical cancer occurs in all age groups. All patients except one were married, while all were parous. Forty-four percent of the patients presented with stages III and IV disease and hence were unsuitable for surgery. The youngest patient was aged 17 years, indicating the need for cancer screening among adolescents and a vigorous family planning program that emphasizes barrier contraception.

Ibekwe, P.C. and A.C. Ikeme. "Routine Screening for HIV Infection in Booked Antenatal Women: How Justified in Developing Countries?" *African Journal of Reproductive Health/Revue Africaine de la Santé Reproductive*, 5(2):7-9, August 2001.

Infection with HIV has become a pandemic and has posed a great health problem, both in developed and developing countries. In response, most developed countries offer routine screening to all pregnant women and to test them for HIV after counseling and obtaining informed consent. In developing countries, this approach has also been suggested but has not been seriously implemented. Following the increasing incidence of HIV infection throughout the world, a policy of routine HIV screening for pregnant women was adopted in the obstetric department of the University of Nigeria Teaching Hospital, Enugu, Nigeria, in the latter part of 1998. In a retrospective analysis of the antenatal records of 600 women, 234 (39 percent) failed to have the HIV test performed, even when they had consented to it. Some of the reasons for nontesting include the high cost of routine screening and lack of structure for taking care of HIV-positive pregnant mothers and their babies. In this regard, developing countries should emphasize prevention through education, information, and communication. Health education campaigns should be intensified as well as prevention and treatment of STDs, changes in behavioral patterns of the people, promotion of barrier methods of contraception, and the practice of monogamous faithful relationships. These cost-effective interventions are worth exploring in resource poor countries; governments and other health care providers are called upon to make this a priority.

Kathcy, K.C., D.D. Datubo-Brown, M. Gogo-Abite, and U.U. Iweha. "Benign Breast Lesions in Nigerian Women in Rivers State." *East African Medical Journal*, 67(3):201-4, March 1990 (Department of Pathology, University of Port Harcourt Teaching Hospital, Nigeria).

A review of histologically confirmed benign breast lesions in 155 Nigerian women seen over a four-year period (1984-87) at the University of Port Harcourt Teaching Hospital showed that 79 (51 percent) had fibroadenoma, 43 (27.7 percent) had fibrocystic disease, 23 (14.8 percent) had inflammatory disorders, and 10 (6.5 percent) had a miscellaneous group of lesions. Thirteen patients had multiple fibroadenomas, while 4 had successive or recurrent tumors. Out of 33 patients, 21 had fibroadenoma for at least one year. The positive correlation between the average tumor size and duration of symptoms suggests that delay in seeking medical attention contributes to the large size of fibroadenomas often seen in Sub-Saharan Africa. The possibility that the high reproductive rate may contribute to the relatively low frequency of fibrocystic disease in this series is discussed.

Messersmith, L.J., T.T. Kane, A.I. Odebiyi, and A.A. Adewuyi. "Who's at Risk? Men's STD Experience and Condom Use in Southwest Nigeria." *Studies in Family Planning*, 31(3):203–16, September 2000.

Many STD/HIV prevention programs worldwide assume that individuals' risk of acquiring STDs, including HIV infection, is highest in the context of commercial sex. To address this assumption, research conducted in urban Southwest Nigeria combined qualitative and quantitative methods in order to examine men's sexual behavior, condom use, and STD experience in different types of sexual relationships (marital, casual, and commercial). Logistic regression analysis of survey data indicates that the number of sexual partners and sex with sex workers are positively and significantly related to STD experience. Follow-up, indepth interviews with clients of sex workers indicate, however, that these men are actually more likely to report having contracted an STD from a casual sex partner than from a sex worker. Men are most uncertain about their vulnerability to STDs with casual partners. Men's condom use is highest in commercial sex, inconsistent in casual relationships, and lowest in marriage. STD/HIV-prevention programs need to address the range of sexual relationships and the meanings and behaviors associated with them.

Ogbeide, O., V. Wagbatsoma, and A. Orhue. "Anaemia in Pregnancy." *East African Medical Journal*, 71(10):671–3, October 1994 (Department of Community Health, University of Benin, Nigeria).

Four hundred and thirty-five pregnant women attending the antenatal clinic at the University of Benin Teaching Hospital were investigated. The ages of the women ranged from 16–42 years, with an average hemoglobin level of 10.52 gms percent. The prevalence of anemia among these antenatal clients was 20.7 percent, and 2.8 percent had severe anemia. This shows that anemia is still a problem in Nigeria. Mothers in the age groups 10–19 years and 30–39 years constituted higher percentages of anemic cases compared with the other age groups. The percentages of the pregnant women who were anemic were also higher in social classes IV and V, contributing 27.6 percent and 21.9 percent, respectively. One hundred and eight (49.4 percent) of the pregnant women booked for antenatal care during the third trimester and the percentage of anemia was highest in this group, 54 (28.4 percent). About half of the mothers who were para 5+ were anemic. Nutrition education components of the antenatal care should be intensified. In this regard, mothers should be encouraged to participate actively in income-generating activities to improve their economic and nutritional status. Also, during the health education activities in the clinics, the importance of family planning and early bookings for antenatal care need to be stressed.

Obunge, O.K., L. Brabin, N. Dollimore, J. Kemp, C. Ikokwu-Wonodi, S. Babatunde, S. White, N.D. Briggs, and C.A. Hart. "A Flowchart for Managing Sexually Transmitted Infections Among Nigerian Adolescent Females." *Bulletin of the World Health Organization*. 79(4):301–5, 2001.

The aim was to devise a flow chart suitable for assessing risk of trichomoniasis, chlamydia, and gonorrhea in an adolescent population, not all of whom will be sexually experienced or currently in a relationship. The data used to produce the flow chart were generated from cross-sectional microbiological surveys of girls aged 14–19 years in Port Harcourt, Nigeria. The flow chart screened on the basis of sexual experience, recent sexual activity, a positive urine leukocyte esterase (LE) test, and among LE negatives, a history of malodorous/pruritic discharge. Using this flow chart, the authors found that 26.2 percent of all adolescents screened would receive treatment for cervicitis and vaginitis. Chlamydial, gonococcal, and trichomonal infections were correctly diagnosed in 37.5 percent, 66.7

percent, and 50 percent of the cases, respectively. Although the flow chart is more suitable for an adolescent population than the vaginal discharge algorithm used in syndromic management protocols, it still lacks precision and needs to be adapted to local settings.

Owolabi, A.T. and S.P. Owolabi. "Socioeconomic Implications of the Management of HIV–Positive Pregnant Women—A Review of Four Cases in Ile-Ife, Nigeria." *Nigerian Journal of Medicine*, 10(4):169–72, October–December, 2001 (Departments of Obstetrics and Gynaecology, College of Health Sciences, Obafemi Awolowo University, Ile-Ife, Nigeria).

AIDS constitutes a major public health problem in developed and developing countries. The experience at Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Nigeria, has shown that HIV/AIDS is not uncommon. Screening of pregnant women with symptoms and signs suggestive of HIV/AIDS revealed five cases in three years (1996–98). Four of these cases were reviewed to highlight the socioeconomic implications and the burden of the disease on maternal and child health in the environment. It was shown that the socioeconomic status of the women could not support adequate management of their conditions resulting in poor outcomes, such as abortion, increased risk of infection to the baby, and debts from hospital bills. Improvement in the socioeconomic conditions of the populace and community health education on HIV/AIDS will enhance the outcome of management in pregnancy. In addition to emphasizing preventive measures, research into appropriate modes of management of HIV/AIDS in pregnancy is urgently needed in this environment.

VII. PROGRAMS AND INTERVENTIONS

Ahmed, Z. "Northern Youth Strategy Programme—Gari Ya Waye." *Grassroots Health News*, 1(3):4, July–December 2000.

The dramatic and widespread changes in behavior, policy, and resource allocation that the Northern Youth Strategy (NYS) program anticipates require concerted efforts and action among many segments of society. Social mobilization efforts (e.g., Gandhi's grassroots movement in India, the international women's movement, the antiapartheid campaign in South Africa, the worldwide environmental movement) have set precedents in recent history that resulted in major shifts in societal norms and policies, and that promote the belief that social change is one of the prerequisites for sustainable positive youth empowerment. The NYS is a special initiative focusing on the needs of out-of-school youths, male and female, in the northern cluster. After a needs assessment, the Grassroots Health Organization of Nigeria (GHON) embarked on an advocacy and community mobilization support to all stakeholders. This program was supported by CEDPA. GHON developed a comprehensive advocacy package specifically targeted to the entire project areas of Dala, Warawa, and Ungogo, community-based organizations (CBOs), and LGAs of Kano State. NGOs, CBOs and other stakeholders were trained in social mobilization. Specific strategies were drawn for different target groups, which include adolescents, parents, the communities, and LGA needs. Other programs carried out include radio discussions and advocacy visits to policymakers.

Akpala, C.O. "An Evaluation of the Knowledge and Practices of Trained Traditional Birth Attendants in Bodinga, Sokoto State, Nigeria." *Journal of Tropical Medicine and Hygiene*, 97(1):46–50, February 1994 (Department of Community Medicine, College of Medicine, University of Sokoto, Nigeria).

To improve maternal and child health services, especially in the rural areas, a program to train traditional birth attendants (ungo zoma) (TBAs) was established by the Sokoto state government of Nigeria in 1975. The impact of the training program on the knowledge and practices of TBAs in a rural community in the state was studied. Seventy-four TBAs (43 trained and 31 untrained), were interviewed. Statistically significant differences were observed in the proportion of both groups of TBAs able to recognize high-risk pregnancies and deliveries for referral to health institutions. In contrast to the trained attendants, none of the untrained TBAs offered any of the following maternal and child health services: antenatal care, advice on immunization of children or their mothers during pregnancy, and family planning. Suggestions for improving the knowledge and practices of the TBAs in Sokoto as well as in other communities wishing to embark on similar programs are offered.

Anonymous. "Controversial Ad Campaign Boosts Condom Sales in Nigeria." *AIDS WEEKLY*, p. 22, April 16, 2001.

Although the Society for Family Health (SFH) reports that it does not know why, undoubtedly the society's explicit radio jingles account for at least part of the 30 percent increase in condom sales during the first quarter of 2001 over sales in the last quarter of 2000. According to an article by the PanAfrican News Agency (PANA), SFH, an NGO "dedicated to the campaign against HIV/AIDS and promotion of family planning activities in Nigeria," reported that it sold 17.6 million condoms in the first 2 months of this year, out of the 85 million condoms it planned to sell this year ("Condom Sales Soar in Nigeria," PANA, April 1, 2001). Sales of injectable contraceptives also were high: SFH reported that it sold

233,911 out of the total 740,000 it had planned to sell in 2001. PANA reported that the organization announced that it would introduce new birth control pills in eight sites in Nigeria during April 2001. "SFH has embarked on a media blitz to promote condom use in the country, home to an estimated 2.6 million HIV/AIDS carriers and a growing population of 110 million people," said the PANA article. "But the society's radio jingles on condoms have been pulled off the airwaves after a barrage of criticism from the public over their explicitness." The organization reports that it is trying to resolve the issue with the Advertising Practitioners' Council of Nigeria.

Babalola, S. "Mobile Family Planning Drama." *Promotion and Education*, Spec No:42-5, December 1993.

Bankole, A., G. Rodriguez, and C.F. Westoff. "Mass Media Messages and Reproductive Behaviour in Nigeria." *Journal of Biosocial Sciences*, 28(2):227-39, April 1996 (Office of Population Research, Princeton University, New Jersey, USA).

This paper examines the effects of exposure to mass media messages promoting family planning on the reproductive behavior of married women in Nigeria, using cross-sectional data. Longitudinal data are also used to ensure that exposure to media messages predates the indicators of reproductive behavior. Cross-sectional analysis suggests that (1) contraceptive use and intention are positively associated with exposure to mass media messages, and (2) women who are exposed to media messages are more likely to desire fewer children than those who are not exposed to such messages. Similarly, analysis of the longitudinal data shows that exposure to mass media messages is a significant predictor of contraceptive use. Thus, exposure to mass media messages about family planning may be a powerful tool for influencing reproductive behavior in Nigeria.

Brieger, W.R., G.E. Delano, C.G. Lane, O. Oladepo, and K.A. Oyediran. "West African Youth Initiative: Outcome of a Reproductive Health Education Program." *Journal of Adolescent Health*, 29(6):436-46, December 2001 (African Regional Health Education Centre, College of Medicine, University of Ibadan, Ibadan, Nigeria).

Purpose: To describe the implementation and evaluation of an adolescent reproductive health peer education program in West Africa. The program, known as the West African Youth Initiative (WAYI), was developed to improve knowledge of sexuality and reproductive health, and promote safer sex behaviors and contraceptive use among sexually active adolescents in Nigeria and Ghana. **Methods:** Between November 1994 and April 1997, two organizations, the Association for Reproductive and Family Health (ARFH), based in Nigeria, and Advocates for Youth, based in Washington D.C., supported community-based youth-serving organizations in the two countries to implement peer education projects. Consultants from the African Regional Health Education Centre (ARHEC) in Nigeria provided technical assistance in designing and conducting a quasi-experimental process and outcome evaluation of the projects. **Results:** There were significant differences over time and between intervention and control groups concerning reproductive health knowledge, use of contraceptives in the previous 3 months, willingness to buy contraceptives, and self-efficacy in contraceptive use. **Conclusions:** Overall, the project provides evidence that peer education is most effective at improving knowledge and promoting attitudinal and behavior change among young people in school settings.

Brieger, W.R., S.A. Orisasona, P.B. Ogunlade, U.O. Ayodele, and A. Iroko. "Community Partners for Health: Urban Health Coalitions in Lagos, Nigeria." *International Quarterly of Community Health Education*, 20(1):59-81, 2001.

Basic Support for Institutionalizing Child Survival (BASICS) was given a mandate by the U.S. Agency for International Development to find innovative ways to meet the child health needs of poor Nigerian urban communities. BASICS inventoried communities in the Lagos metropolitan area to identify CBOs and private health facilities that could form coalitions that might plan and deliver child and family health services such as immunization and prompt treatment. Six Community Partners for Health (CPH) coalitions formed in late 1995. In late 1997, documentation of the progress and processes of CPH formation and functioning was carried out through a review of documents, interviews with CPH leaders, discussions with CBO members, and textual analysis of CPH board meeting minutes, in order to define the CPH approach, the organizational structures that result from that approach, the achievements of the CPHs, and the potential sustainability of the approach. All CPHs have developed a work plan and all have undertaken programmatic activities, including child immunization campaigns, environmental cleanup, and awareness campaigns to alert the public on the dangers of HIV/AIDS. Most CPHs have also developed three main mechanisms for financial sustainability. Finally, CPHs have also been calling on each other for technical and management assistance. This augurs well for future independent action and sustainability, and BASICS staff members themselves have been promoting inter-CPH communication and activities among the Lagos CPHs.

Johns Hopkins School of Public Health Center for Communication Programs. "Women's Empowerment Gains in Nigeria." *Communication Impact*, (8):1-2, February 2000.

The Democracy and Governance Project has contributed to women's empowerment gains in Nigeria. This project aims to enable women to participate more in political life and to place women's issues, such as access to health care, children's education, and enforcement of gender-balanced laws, on the national political agenda. It capitalized on the existing networks, strengths, and infrastructure of 31 NGOs. Phase I of the project was implemented between March 1997 and February 1998, addressing three main issues: women's political empowerment, fundamental human rights and civic responsibility, and democratic participation. The NGOs conducted community education, a hands-on, leadership in capacity-building workshop, lobbying and advocacy initiatives, and the promotion of women political candidates in the mass media. An evaluation of the impact of the project showed that the level of exposure to democracy and governance activities was directly and positively correlated with knowledge, attitudes, and behaviors regarding democracy and governance issues. In addition, findings of the evaluation testify to the positive contribution of the project and demonstrate the effectiveness of such multimedia and grassroots approaches to democracy and governance reform.

Kwast, B.E. "Reduction of Maternal and Perinatal Mortality in Rural and Peri-Urban Settings: What Works?" *European Journal of Obstetrics, Gynaecology and Reproductive Biology*, 69(1):47-53, October 1996 (MotherCare Project, John Snow, Inc., Arlington, VA, USA).

The purpose of this article is twofold: first, to lay out conceptual frameworks for programming in the fields of maternal and neonatal health for the reduction of maternal and peri/neonatal mortality, and second, to describe selected MotherCare demonstration projects in the first five years between 1989 and 1993 in Bolivia, Guatemala, Indonesia, and Nigeria. In Inquisivi, Bolivia, Save the Children/Bolivia, worked with 50 women's groups in remote rural villages in the Andean mountains. Through a participatory research process, autodiagnosis, actions identified by women's groups included provision of family planning through a local NGO, training of community birth attendants, and income-generating projects. In Quetzaltenango, Guatemala, access was improved through the training of TBAs

in timely recognition and referral of pregnancy/delivery/neonatal complications, while quality of care in health facilities was improved through modifying health professionals' attitude towards TBAs and clients and implementation of management protocols. In Indonesia, the University of Padjadjaran addressed issues of referral and emergency obstetric care in the West Java subdistrict of Tanjungsari. Birthing homes with radios were established in 10 of the 27 villages in the district, where trained nurse-midwives provided maternity care on a regular basis. In Nigeria, professional midwives were trained in interpersonal communication and lifesaving obstetric skills, while referral hospitals were refurbished and equipped. While reduction in maternal mortality after such a short implementation period is difficult to demonstrate, all projects showed improvements in referral and in reduction in perinatal mortality.

Kwast, B.E. "Building a Community-Based Maternity Program." *International Journal of Gynaecology and Obstetrics*, 48(Suppl):S67–82, June 1995 (MotherCare Project/John Snow, Inc., Arlington, VA, USA.)

The MotherCare Project has as its goal the reduction of maternal and neonatal mortality and related morbidities as well as the promotion of the health of women and newborns. To achieve these goals, maternal and family planning programs were strengthened in both rural and urban settings through three intervention strategies: policy reform, affecting behaviors, and improving services. The fundamental premise in each project was to strengthen the weakest part of the maternity care pyramid, ensuring linkages among all levels of service, from community through to the referral hospital level. In rural Andean populations of Bolivia, knowledge of danger signs and women's response to them improved, increasing the use of prenatal and family planning services through a participatory problem-solving and community-based strategy. In West Java, Indonesia, bringing professional midwifery services and facilities closer to women together has resulted in a positive response to their use. Augmenting this intervention with a transport and intercommunication system, together with improved hospital practice through perinatal mortality meetings and inservice training for doctors and midwives, has reduced the maternal and perinatal mortality over a four-year period. Hospital practice has improved in Uganda and in two states of Nigeria. Maternal mortality and morbidity have been reduced in the training facility where seminars for physicians, training of midwives in lifesaving midwifery, and interpersonal communication skills have taken place. Equipment and supplies have been improved. Furthermore, in rural Guatemala, implementation of norms and protocols, expert supervision, and sensitization of hospital staff to the needs of the community has increased referral by TBAs to the hospital and has reduced perinatal mortality.

Ladipo, O.A., R. McNamara, G.E. Delano, E. Weiss, and E.O. Otolurin. "Family Planning in Traditional Markets in Nigeria." *Studies in Family Planning*, 21(6):311–21, November–December 1990 (Department of Obstetrics and Gynaecology, University College Hospital, University of Ibadan, Nigeria).

Operations research on the Ibadan Market-Based Distribution Project in Nigeria investigated the feasibility of a contraceptive distribution system using traders in the traditional markets to sell oral contraceptives, condoms, and foaming tablets. Two hundred and thirty-five female and male traders were trained and supplied with contraceptives, malaria treatments, and oral rehydration salts to sell at low prices in 39 markets. This article presents findings from qualitative and quantitative research conducted in 1985–89 to determine if the sale of contraceptives in the marketplace is acceptable to participating traders and shoppers and to identify trader and market characteristics associated with sales volume. Sales of contraceptives totaled 18,286 pill cycles, 11,818 packages of four condoms

each, and 4,429 packages of four foaming tablets each. The average monthly sale for each participating trader was 5.3 units. Adaptations of this model are being tested in other Nigerian cities and in Accra, Ghana.

Madunagu, B. and L. Schreck. "Girl Power: Asserting Sexual Rights in Nigeria. *POPLINE*, p.2, 2000 (Unpublished).

Nigeria is Africa's most populous country, with over 113 million inhabitants, of which 27 million are adolescents. It is noted that more than 83 percent of the women from this young population have had sex by the age of 20. Consequently, these women are at risk of unintended pregnancy and sexually transmitted infections, including HIV/AIDS. These risks can be reduced through information about condoms and women's health from the Girls' Power Initiative (GPI), which receives technical and financial support from the International Women's Health Coalition, an Open Society Institute grantee. In addition to providing preventive programs against HIV/AIDS, GPI also addresses the biological, psychological, social, economic, and cultural aspects of sexuality. Furthermore, it also seeks to influence policy and has successfully lobbied laws banning female genital mutilation in three states. Through these programs, GPI is changing attitudes and behavior and helping shape a more hopeful future for Africa's young women.

Matthews, M.K., R.L. Walley, A. Ward, M. Akpaide, P. Williams, and A. Umoh. "Training Traditional Birth Attendants in Nigeria—The Pictorial Method." *World Health Forum*, 16(4):409–13, 1995 (School of Nursing, Memorial University, St. John's, Newfoundland, Canada).

High maternal mortality and morbidity rates are a challenge for all involved in the care of mothers and babies. One response takes the form of an educational program led by professional midwives to teach traditional birth attendants to recognize risk conditions and improve their care of mothers and babies. Such a program was organized as part of a Canadian–Nigerian safe motherhood initiative, carried out in Akwa Ibom State, Nigeria.

Mohammed, A. "Rural Health Advocacy and Sensitization Visits. *Grassroots Health News*. 2(2):4, July–December 2001 (MacArthur Foundation-funded newsletter).

The Grassroots Health Organization of Nigeria's (GHON) technical advisory committee conducted visits and meetings with policymakers and chairmen in Katsina and Taraba states. Among the objectives of the meeting was to publicize the group's programs on reproductive health and poverty alleviation. Courtesy visits were paid to traditional rulers for support in the implementation of the program. GHON carried out campaigns on reproductive health relating to safe motherhood, including the prevention of STDs, HIV/AIDS, vesico-vaginal fistula, and infertility. As such, TBAs, youths and voluntary village health workers were trained as health advocates. In addition, information, education, and communication materials were developed and distributed during trainings and community mobilization workshops. Radio jingles were also relayed to educate the public on common preventable ailments. This program also included the empowerment of women. The program will be replicated in other regions, as it has proved to be useful and successful.

Olunloyo, A. "Investing in Youth Leadership in Nigeria." *Sexual Health Exchange*, 1(3):4–5, 2001.

Action Health Incorporated (AHI) is a Nigerian NGO dedicated to the promotion of adolescent health and development. AHI develops youth leadership in sexual health through various programs using facilitation, information, and health education as its main strategies. Such programs include the Youth Skills Development Program and the school-based health

and life planning clubs. Media and public events sponsored by AHI include Youth Forum, which allows young people to act as leaders and role models, and the annual Teenage Festival of Life, in which the youth are the masters of ceremony for the program. However, cultural and religious inhibitions on sexuality remain a big challenge to AHI's work. Continuous advocacy, sensitization, and outreach are needed to maintain the support of the community, government, and other stakeholders, and to clear the misconceptions about sex education to young people.

Piotrow, P.T., J.G. Rimón 2nd, K. Winnard, D.L. Kincaid, D. Huntington, and J. Convisser. "Mass Media Family Planning Promotion in Three Nigeria Cities." *Studies in Family Planning*, 21(5):265–74, September–October 1990.

Television promotion of family planning and clinic sites in three cities of Nigeria—Ilorin, Ibadan, and Enugu—played a significant role in 1985–88 in increasing the number of new acceptors at family planning clinics in each city. Family planning skits, prepared with advice and support from the local service providers, were included in existing popular entertainment shows. Questions asked in a recall survey among the exposed population in Enugu and Ibadan revealed that about half of those surveyed in both cities had seen the television episodes. Of those who had watched, 79 and 99 percent, respectively, recalled the family planning messages, and 69 and 88 percent, respectively, recalled specific clinic sites mentioned. Following the media promotion, the number of new clinic clients per quarter in Ilorin increased almost five fold (in the original clinics evaluated); in Enugu, the number of new clients per month more than doubled; and in Ibadan, the number of new clients increasing three fold. Use of entertainment through this enter-educate approach is a promising technique that can be replicated in different settings to encourage new clients to seek family planning services.

Webb, G., O.A. Ladipo, and R. McNamara. "Qualitative Methods in Operations Research on Contraceptive Distribution Systems: A Case Study From Nigeria." *Social Science and Medicine*, 33(3):321–6, 1991.

This article discusses the application of qualitative methods in operations research to a family planning service delivery system. Market traders in Ibadan, Nigeria, were trained to sell oral contraceptives, condoms, and spermicidal foaming tablets. The strength of the market associations was a factor influencing acceptance of the project, and the number of customers for the traders' other wares were found to positively influence the volume of sales of contraceptives.

VIII. OTHER TOPICS

Becker, S., K. Feyisetan, and P. Makinwa-Adebusoye. "The Effect of the Sex of Interviewers on the Quality of Data in a Nigerian Family Planning Questionnaire." *Studies in Family Planning*, 26(4):233–40, July–August, 1995 (Department of Population Dynamics, School of Public Health, Johns Hopkins University, Baltimore, MD 21205–2179, USA).

Traditionally, female interviewers have been preferred to men for conducting fertility and family planning surveys. However, in West Africa, evidence for their superiority over male interviewers is mixed. In Nigeria, as part of a four-state pretest of the national family planning questionnaire, an experimental design was incorporated to quantify effects of the sex of the interviewer. In one state, reinterviews were also performed to measure the reliability of responses. In the conservative northern state of Kano, the use of male interviewers was problematic. However, in the other three states, only weak evidence was found to mitigate against the use of male interviewers. In fact, in two states, the proportion of respondents reporting knowledge of several contraceptive methods was significantly higher when male interviewers conducted the survey. Respondents' reports of contraceptive use were very unreliable for interviewers of both sexes.

Meekers, D. "The Effect of Imputation Procedures on First Birth Intervals: Evidence From Five African Fertility Surveys." *Demography*, 28(2):249–60, May 1991 (Committee on Population, National Research Council, Washington, DC 20418).

In most African societies, there is little motivation to remember the dates of demographic events with the level of precision required in demographic surveys. Consequently, it is common that the large majority of survey respondents can provide only the calendar year of occurrence or their age at the time of the event. The World Fertility Survey Group decided to handle the problem of poor date reporting by using a computer program to impute the missing information. This article illustrates the effect of these imputation procedures on crossnational differentials in the proportion of premarital first births in Benin, Cameroon, Cote d'Ivoire, Ghana, and Nigeria. The analysis demonstrates that the exceptionally low proportion of premarital first births in Ghana is an artifact of the imputation procedures.



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